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# PLATES.

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## PLATE II.

### COMPARATIVE VIEWS OF CRESTS.

(See p. 19.)

Plate prepared under the direction of Lull.

- FIG. 1. Type of *Monoclonius crassus* Cope. No. 3998, American Museum of Natural History.  
FIG. 2. Type of *Centrosaurus apertus* Lambe. No. 971, Canadian Geological Survey. After Lambe.  
FIG. 3. Type of *Triceratops flabellatus* Marsh. No. 1821, Yale Museum. After Marsh.  
FIG. 4. Type of *Triceratops serratus* Marsh. No. 1823, Yale Museum. After Marsh.  
FIG. 5. Type of *Diceratops hatcheri* Lull. No. 2412, U. S. National Museum.  
FIG. 6. Type of *Ceratops (Monoclonius) belli* Lambe. No. 491, Canadian Geological Survey. After Lambe.  
FIG. 7. Type of *Torosaurus gladius* Marsh. No. 1831, Yale Museum.

*ep*, epoccipitals.

*sq*, squamosal.

*pa*, parietal.

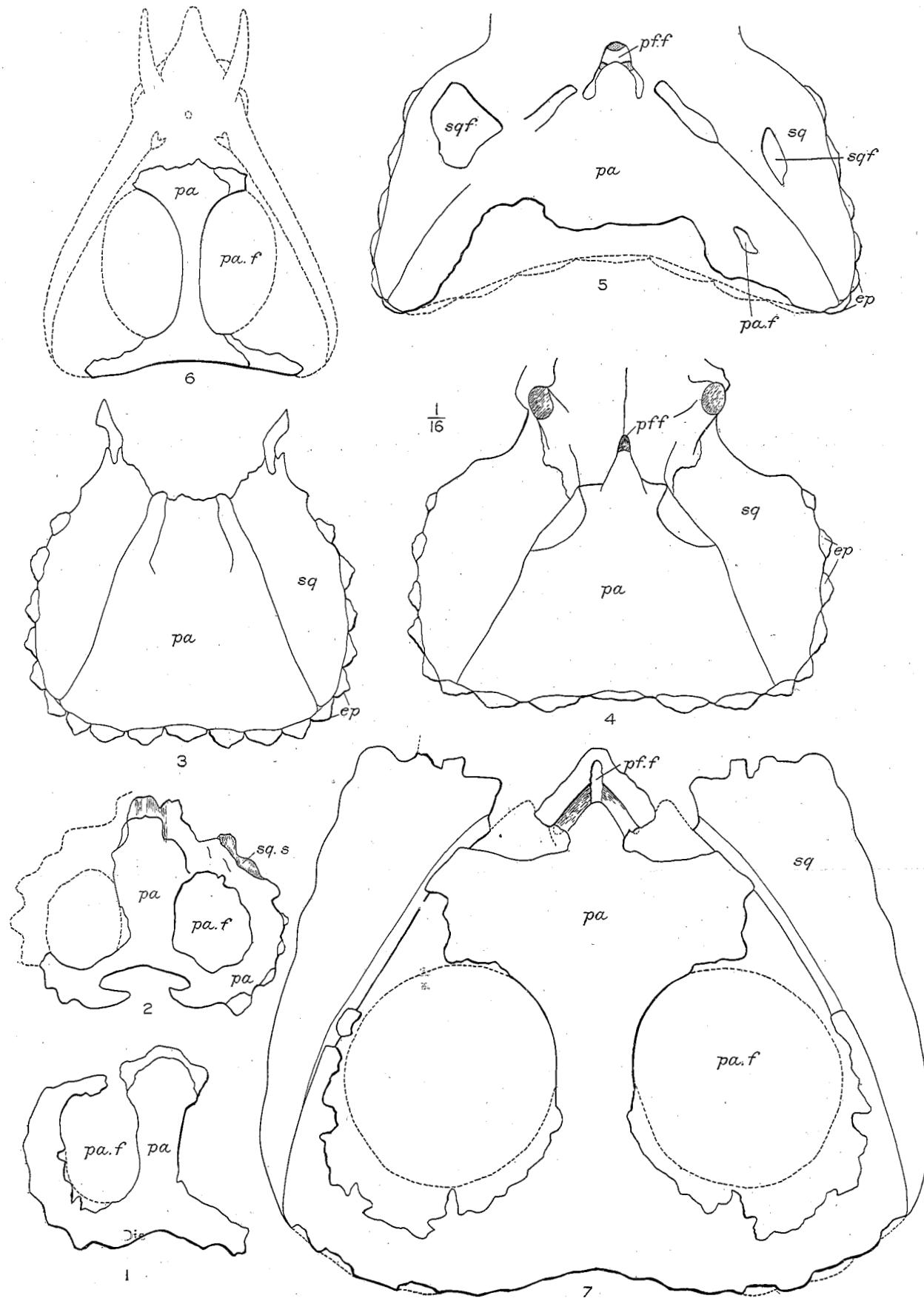
*sqf*, squamosal fenestra.

*paf*, parietal fontanelle.

*sqs*, squamosal suture.

*pff*, postfrontal fontanelle.

All one-sixteenth natural size.



COMPARATIVE VIEWS OF CRESTS.

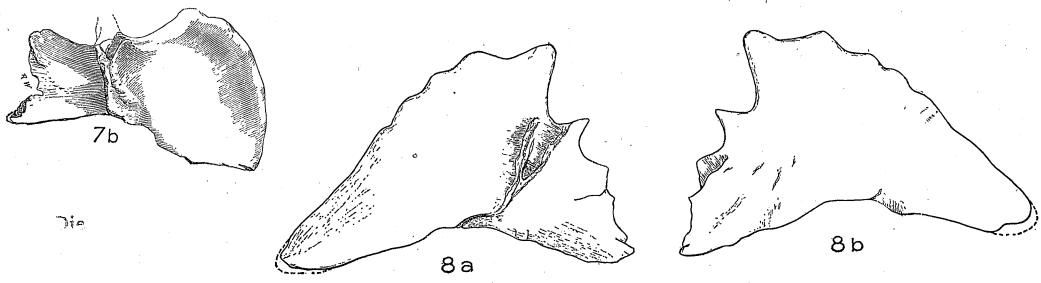
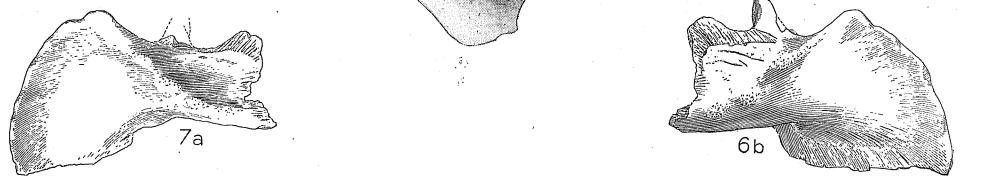
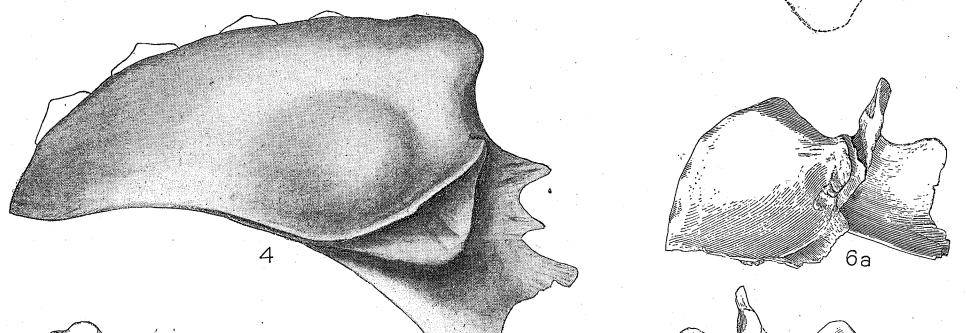
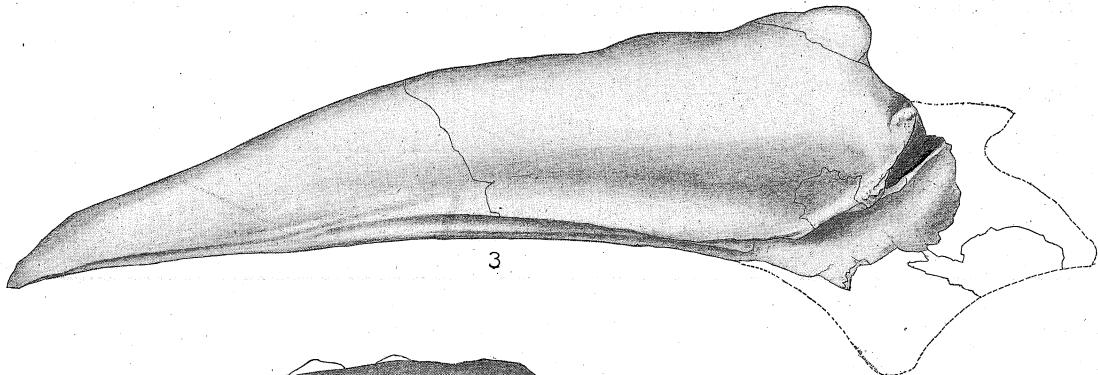
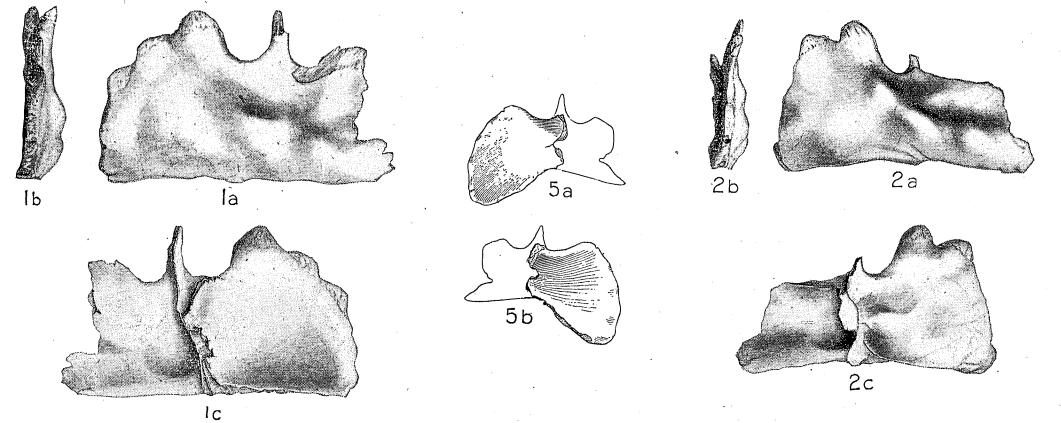
### PLATE III.

#### COMPARATIVE VIEWS OF SQUAMOSAL BONES.

(See p. 20.)

Plate prepared under the direction of Lull.

- FIG. 1. *Ceratops montanus?* Marsh. No. 4802, U. S. National Museum. After Marsh.  
a, Dorsal aspect; b, end view; c, ventral aspect.
- FIG. 2. *Ceratops* sp. (young). No. 2415, U. S. National Museum. After Marsh.  
a, Dorsal aspect; b, end view; c, ventral aspect.
- FIG. 3. *Torosaurus gladius* Marsh. No. 1831, Yale Museum. After Marsh.  
Ventral aspect.
- FIG. 4. *Triceratops flabellatus* Marsh. No. 1821, Yale Museum. After Marsh.  
Ventral aspect.
- FIG. 5. *Monoclonius* sp. No. 3394, American Museum of Natural History.  
a, Dorsal aspect; b, ventral aspect.
- FIG. 6. *Monoclonius* sp. No. 3996, American Museum of Natural History.  
a, Ventral aspect; b, dorsal aspect.
- FIG. 7. *Monoclonius* sp. No. 3995, American Museum of Natural History.  
a, Dorsal aspect; b, ventral aspect.
- FIG. 8. *Ceratops canadensis* Lambe. No. 1254, Canadian Geological Survey. After Lambe.  
a, Ventral aspect; b, dorsal aspect.  
All one-twelfth natural size.



COMPARATIVE VIEWS OF SQUAMOSAL BONES.

## PLATE IV.

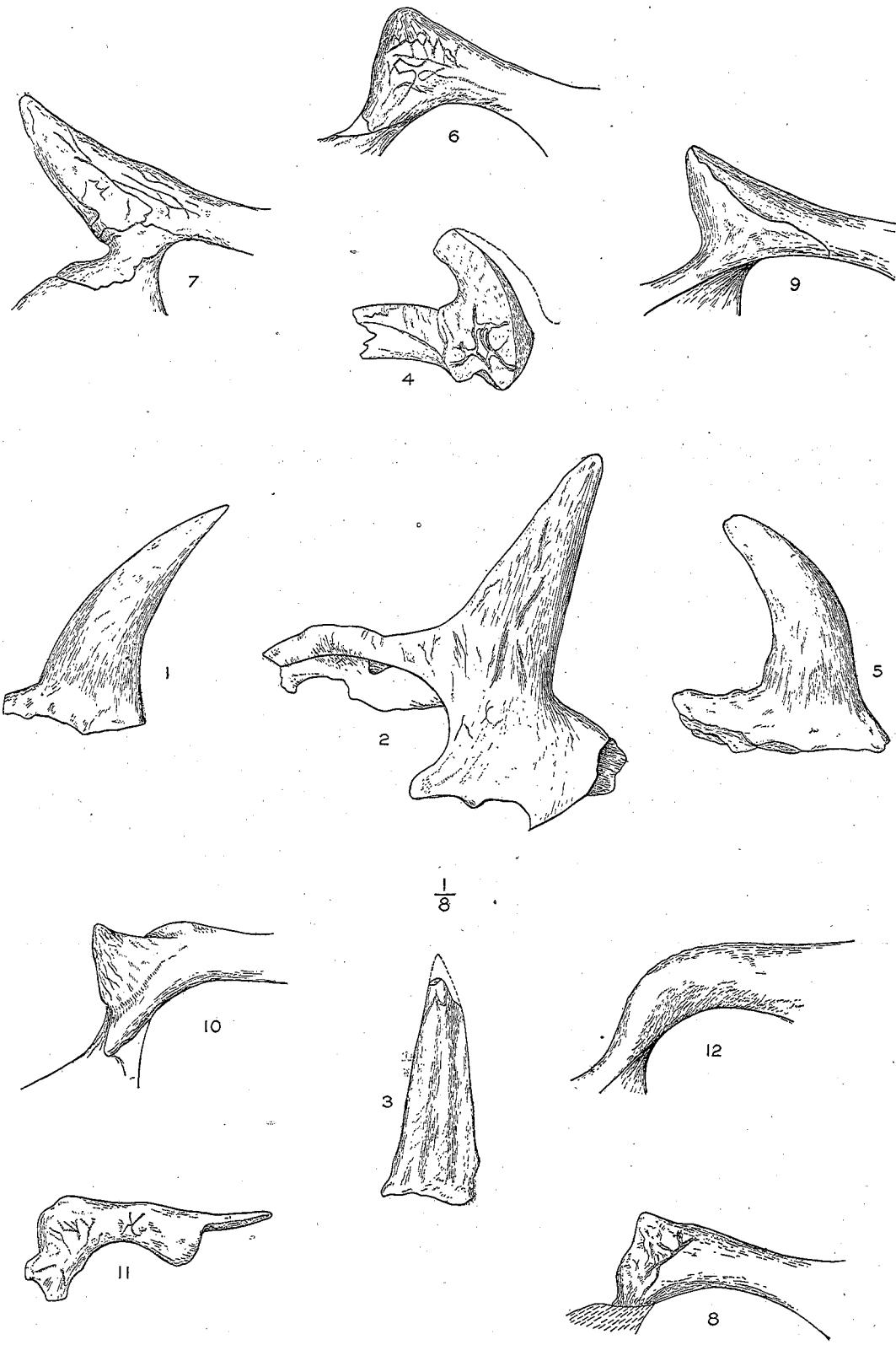
### COMPARATIVE VIEWS OF NASAL HORN CORES.

(See p. 32.)

Plate prepared under the direction of Lull.

- FIG. 1. Type of *Monoclonius dawsoni* Lambe. No. 1173, Canadian Geological Survey. Modified from Lambe.  
FIG. 2. Type of *Monoclonius sphenocerus* Cope. No. 3989, American Museum of Natural History.  
FIG. 3. Type of *Centrosaurus apertus* Lambe. No. 971, Canadian Geological Survey. After Lambe.  
FIG. 4. Type of *Ceratops (Monoclonius) recurvicornis* Cope. No. 3999, American Museum of Natural History.  
After Cope.  
FIG. 5. *Ceratops* sp. referred with a query to *Monoclonius dawsoni* Lambe, by Lambe. No. 190, Canadian  
Geological Survey. Modified from Lambe.  
FIG. 6. Type of *Triceratops horridus* Marsh. No. 1820, Yale Museum.  
FIG. 7. Type of *Triceratops prorsus* Marsh. No 1822, Yale Museum. After Marsh.  
FIG. 8. *Triceratops prorsus?* Marsh. No. 2100, U. S. National Museum.  
FIG. 9. Type of *Triceratops brevicornis* Hatcher. No. 1834, Yale Museum.  
FIG. 10. Type of *Triceratops calicornis* Marsh. No. 4928, U. S. National Museum.  
FIG. 11. Type of *Triceratops obtusus* Marsh. No. 4720, U. S. National Museum.  
FIG. 12. Type of *Diceratops hatcheri* Lull. No. 2412, U. S. National Museum.

The figures are all viewed from the left side and are all one-eighth natural size.



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COMPARATIVE VIEWS OF NASAL HORN CORES.

## PLATE V.

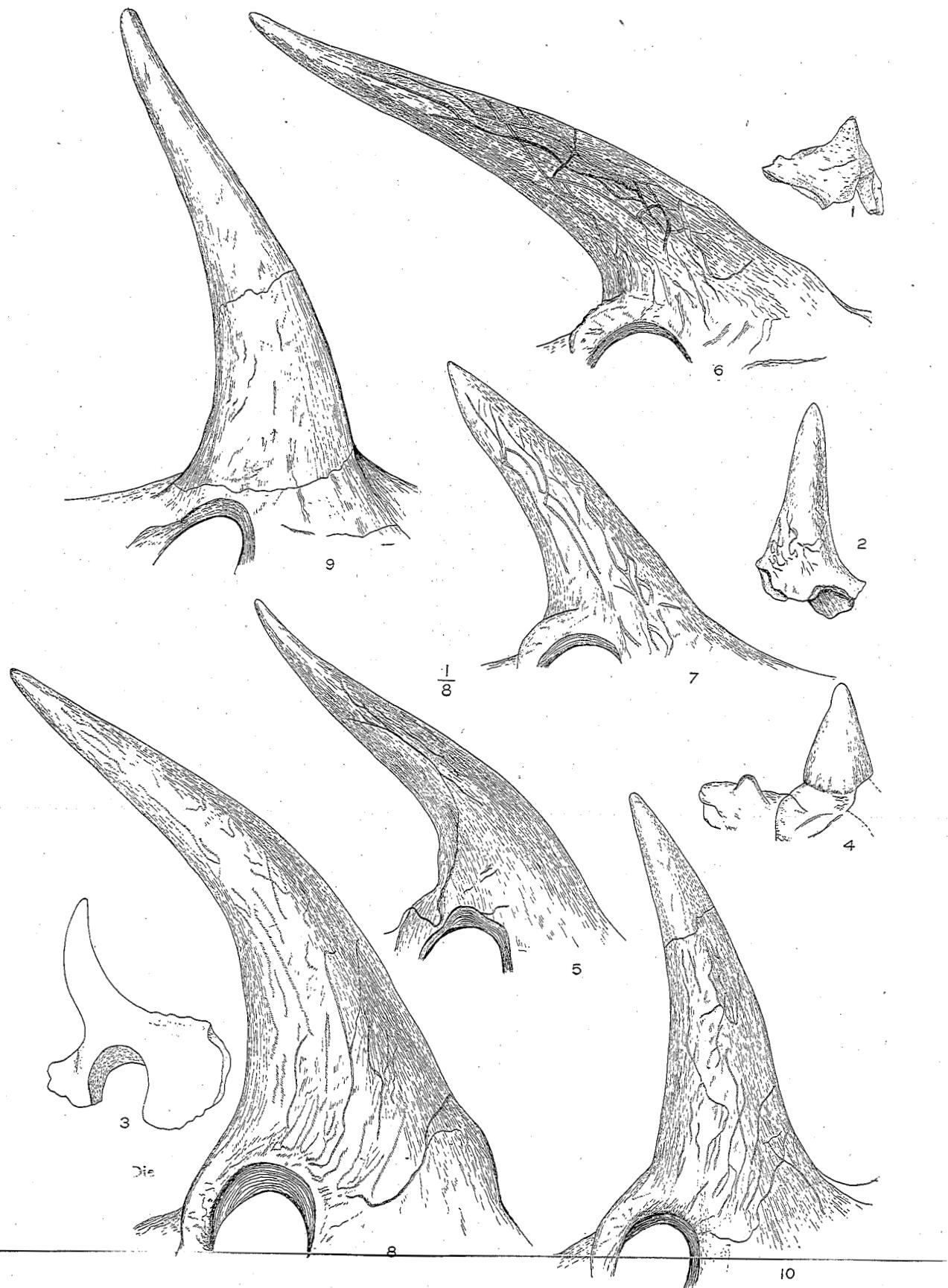
### COMPARATIVE VIEWS OF SUPRAORBITAL HORN CORES.

(See p. 32.)

Plate prepared under the direction of Lull.

- FIG. 1. *Monoclonius crassus*. No. 3997, American Museum of Natural History.  
FIG. 2. Type of *Ceratops montanus* Marsh. No. 2411, U. S. National Museum, oblique back view.  
FIG. 3. Type of *Ceratops (Monoclonius) canadensis* Lambe. No. 1254, Canadian Geological Survey. Modified from Lambe.  
FIG. 4. Type of *Ceratops (Monoclonius) recurvicornis* Cope. No. 3999, American Museum of Natural History. Modified from Cope.  
FIG. 5. Type of *Triceratops prorsus* Marsh. No. 1822, Yale Museum. After Marsh.  
FIG. 6. *Triceratops prorsus?* Marsh. No. 2100, U. S. National Museum.  
FIG. 7. Type of *Triceratops brevicornis* Hatcher. No. 1834, Yale Museum.  
FIG. 8. Type of *Triceratops calicornis* Marsh. No. 4928, U. S. National Museum.  
FIG. 9. Type of *Triceratops (Styracophorus) flabellatus* Marsh. No. 1821, Yale Museum. After Marsh.  
FIG. 10. Type of *Diceratops hatcheri* Lull. No. 2412, U. S. National Museum.

The figures, except fig. 2, are all viewed from the left side and are all one-eighth natural size.



COMPARATIVE VIEWS OF SUPRAORBITAL HORN CORES.

## PLATE VI.

### LOWER JAW OF TRICERATOPS SULCATUS MARSH.

(See p. 39.)

Plate prepared under the direction of Marsh.

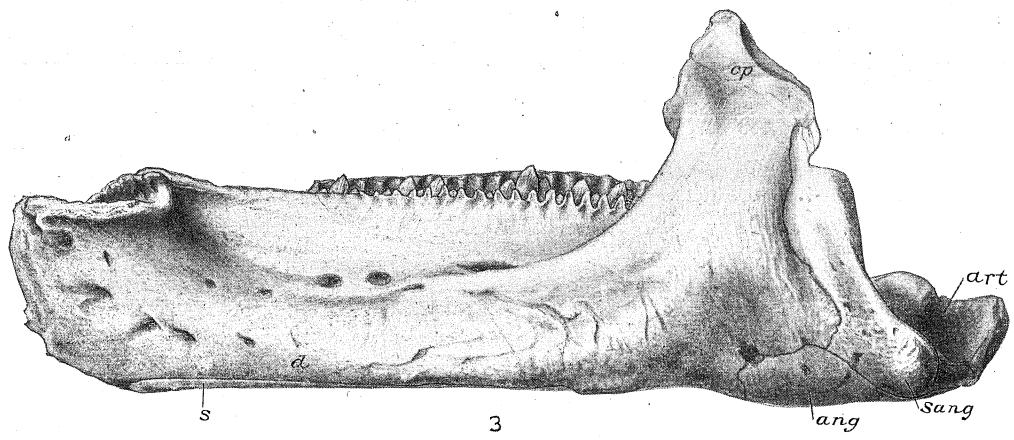
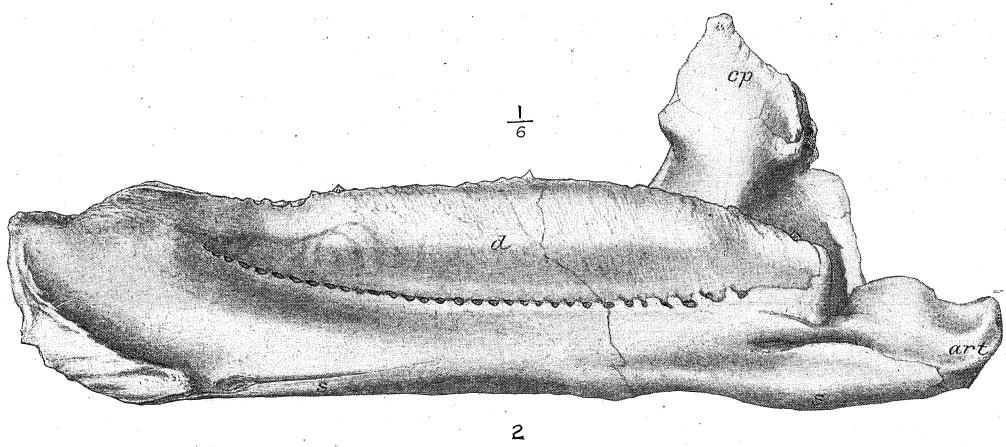
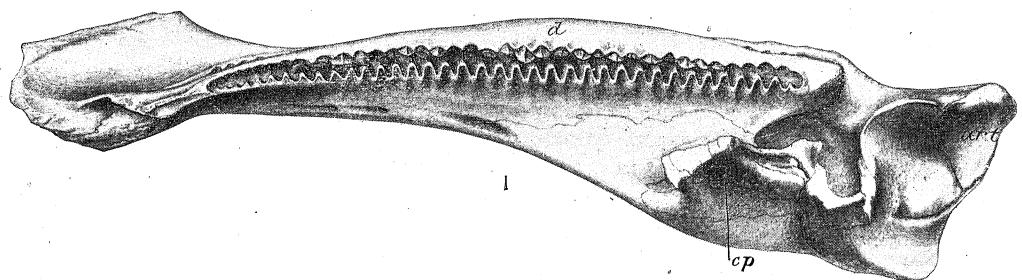
Specimen No. 4276, U. S. National Museum.

FIG. 1. Superior view.

FIG. 2. Internal view.

FIG. 3. External view.

*ang*, Angular; *art*, articular; *cp*, coronoid process; *d*, dentary; *s*, splenial; *sang*, surangular.  
One-sixth natural size.



LOWER JAW OF TRICERATOPS SULCATUS MARSH.

## PLATE VII.

POSTERIOR DORSAL VERTEBRA OF TRICERATOPS PRORSUS MARSH.

(See p. 51.)

Plate prepared under the direction of Marsh.

Specimen No. 4842, U. S. National Museum.

FIG. 1. Anterior view.

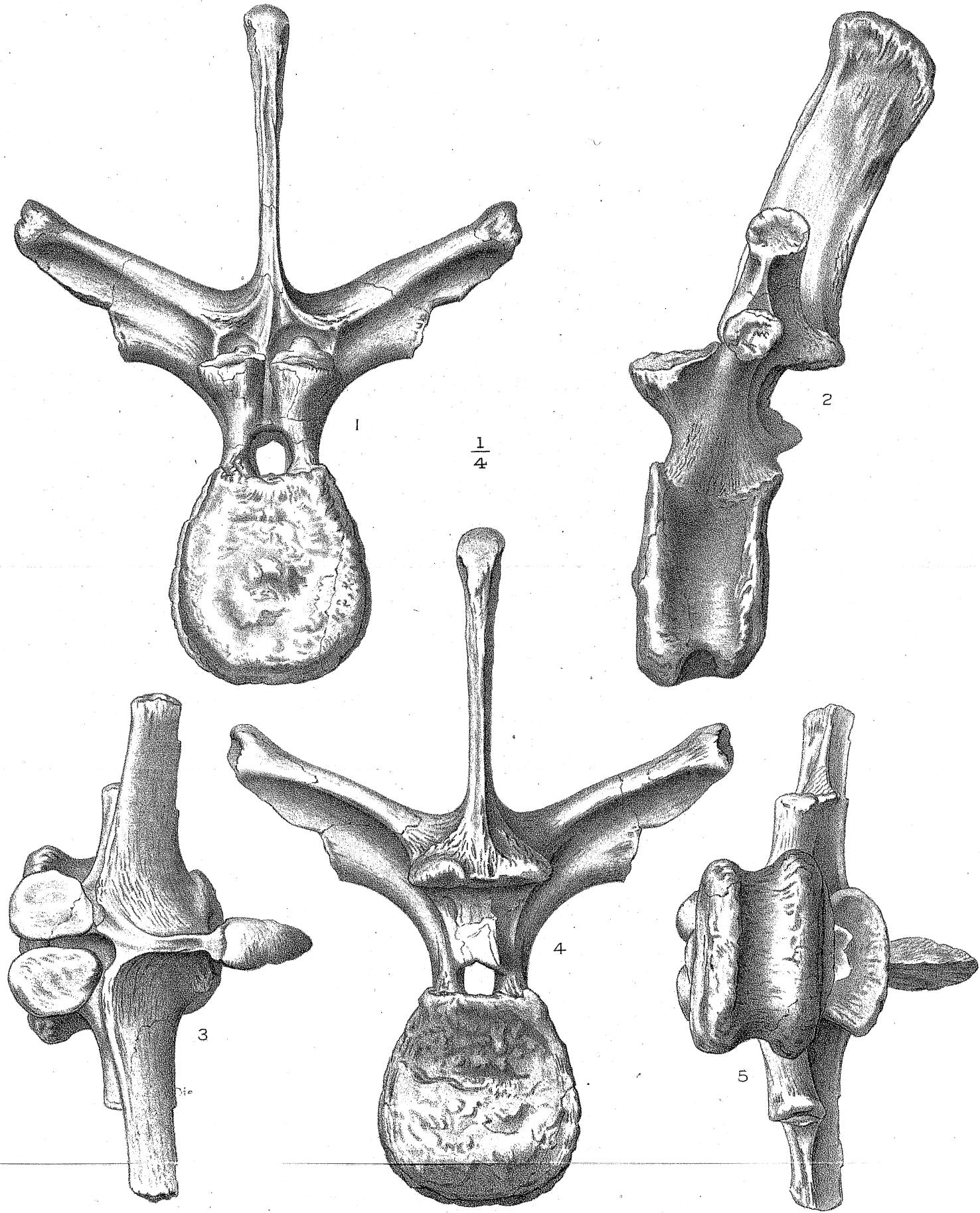
FIG. 2. Left lateral view.

FIG. 3. Superior view.

FIG. 4. Posterior view.

FIG. 5. Inferior view.

One-fourth natural size.



TRICERATOPS PRORSUS, Marsh

## PLATE VIII.

ANTERIOR DORSAL VERTEBRA OF TRICERATOPS PRORSUS MARSH.

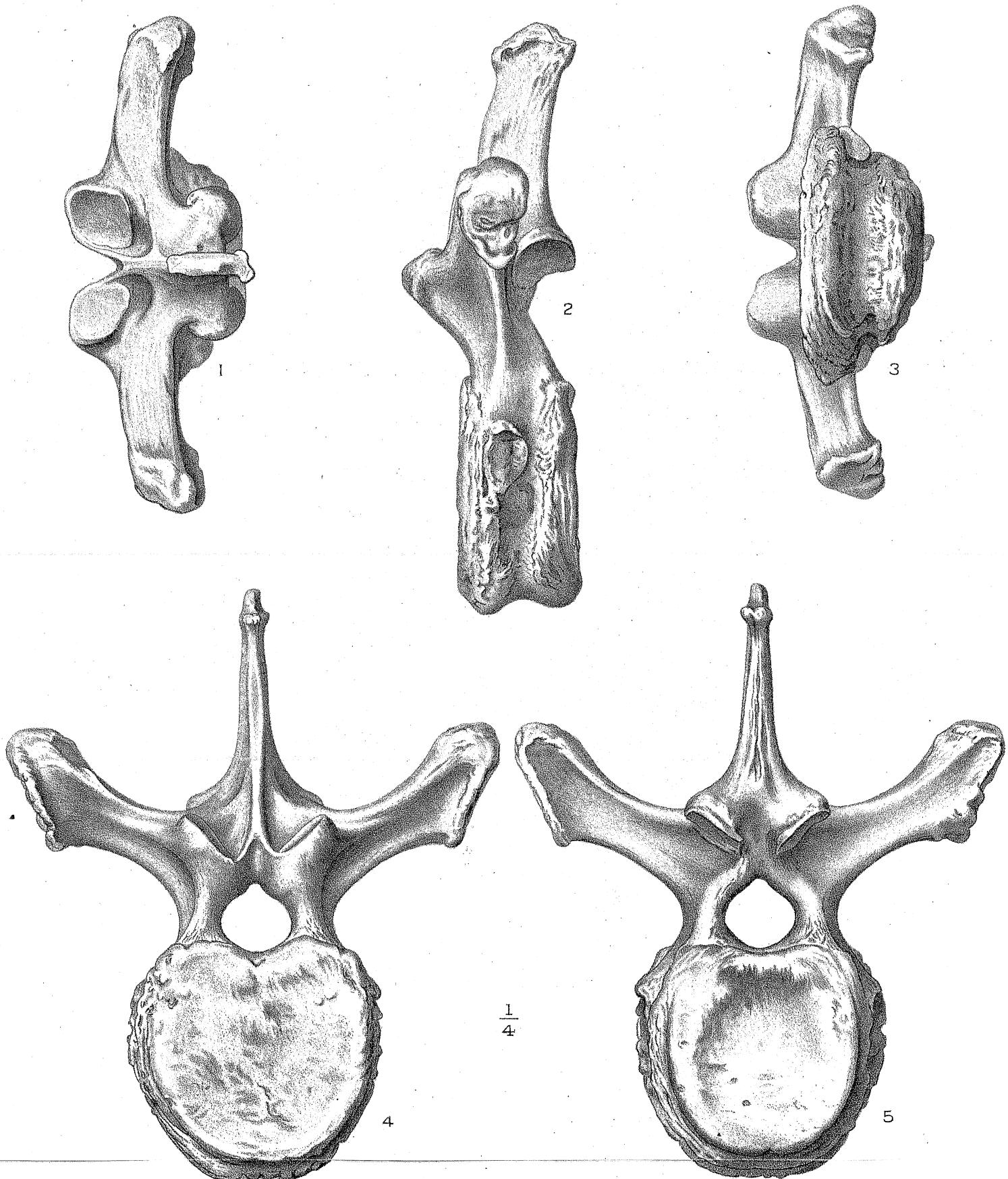
(See p. 50.)

Plate prepared under the direction of Marsh.

Specimen No. 4842, U. S. National Museum.

- FIG. 1. Superior view.
- FIG. 2. Left lateral view.
- FIG. 3. Inferior view.
- FIG. 4. Anterior view.
- FIG. 5. Posterior view.

One-fourth natural size.



TRICERATOPS PRORSUS, Marsh

PLATE IX.

SACRUM OF TRICERATOPS PRORSUS MARSH.

(See p. 51.)

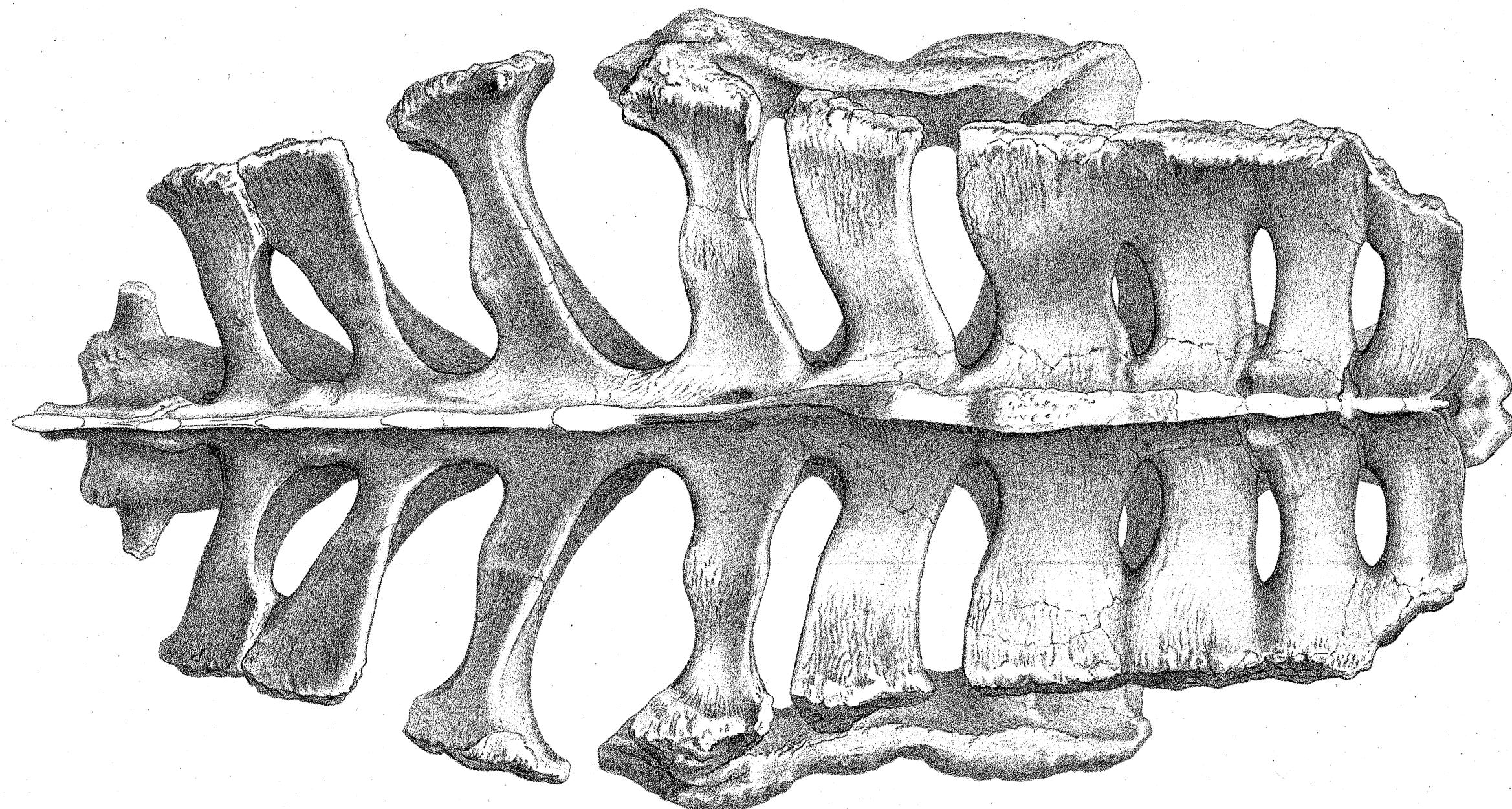
Plate prepared under the direction of Marsh.

Specimen No. 4842, U. S. National Museum. Superior view.

One-fourth natural size.

216

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TRICERATOPS PRORSUS, Marsh

F. BERGER, del.

A. HOEN & CO.

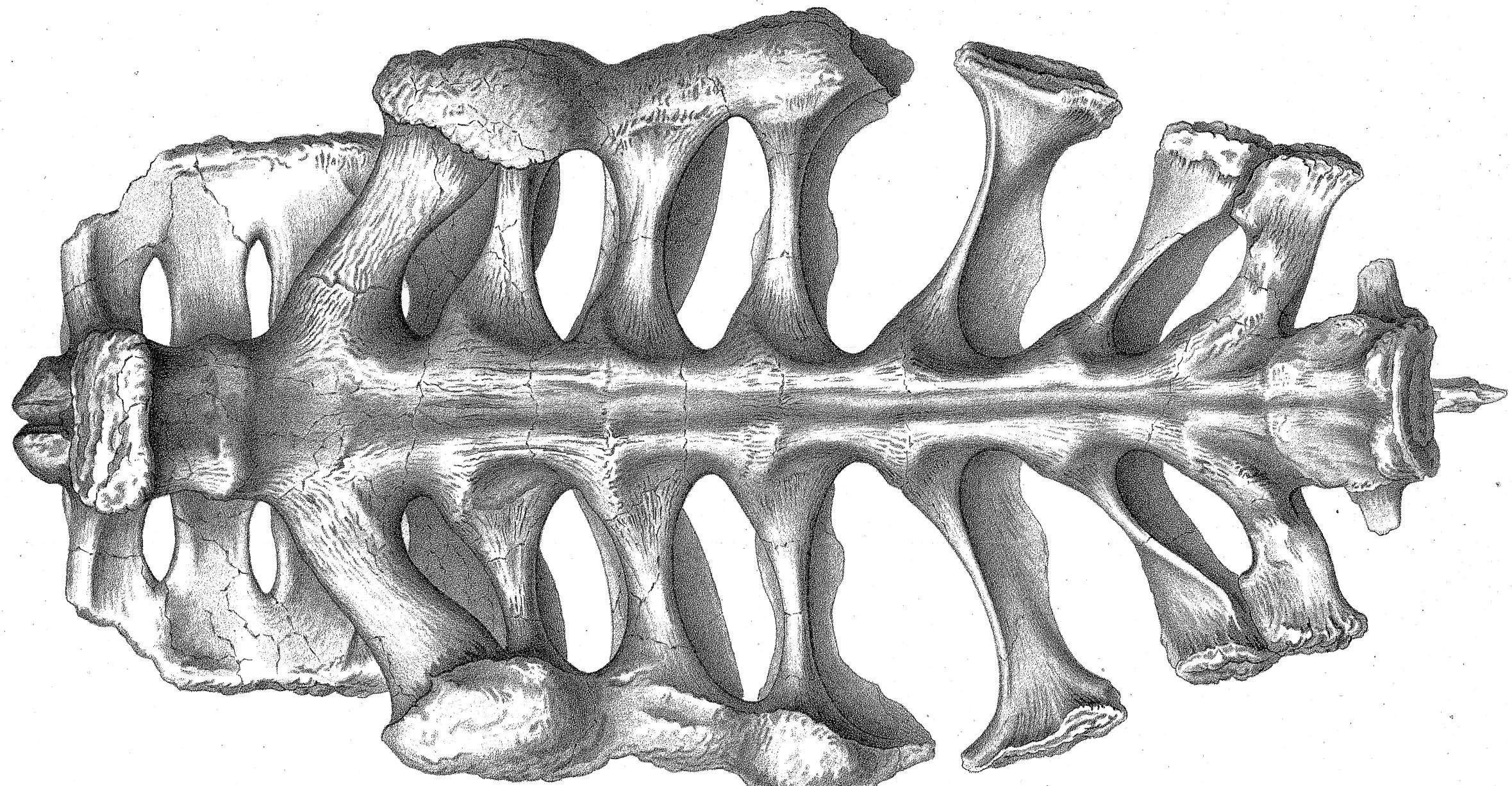
P L A T E X.

SACRUM OF TRICERATOPS PRORSUS MARSH.

(See p. 51.)

Plate prepared under the direction of Marsh.

Specimen No. 4842, U. S. National Museum. Inferior view.  
One-fourth natural size.



$\frac{1}{4}$

TRICERATOPS PRORSUS, Marsh

## PLATE XI.

RIGHT HUMERUS OF TRICERATOPS PRORSUS MARSH.

(See p. 60.)

Plate prepared under the direction of Marsh.

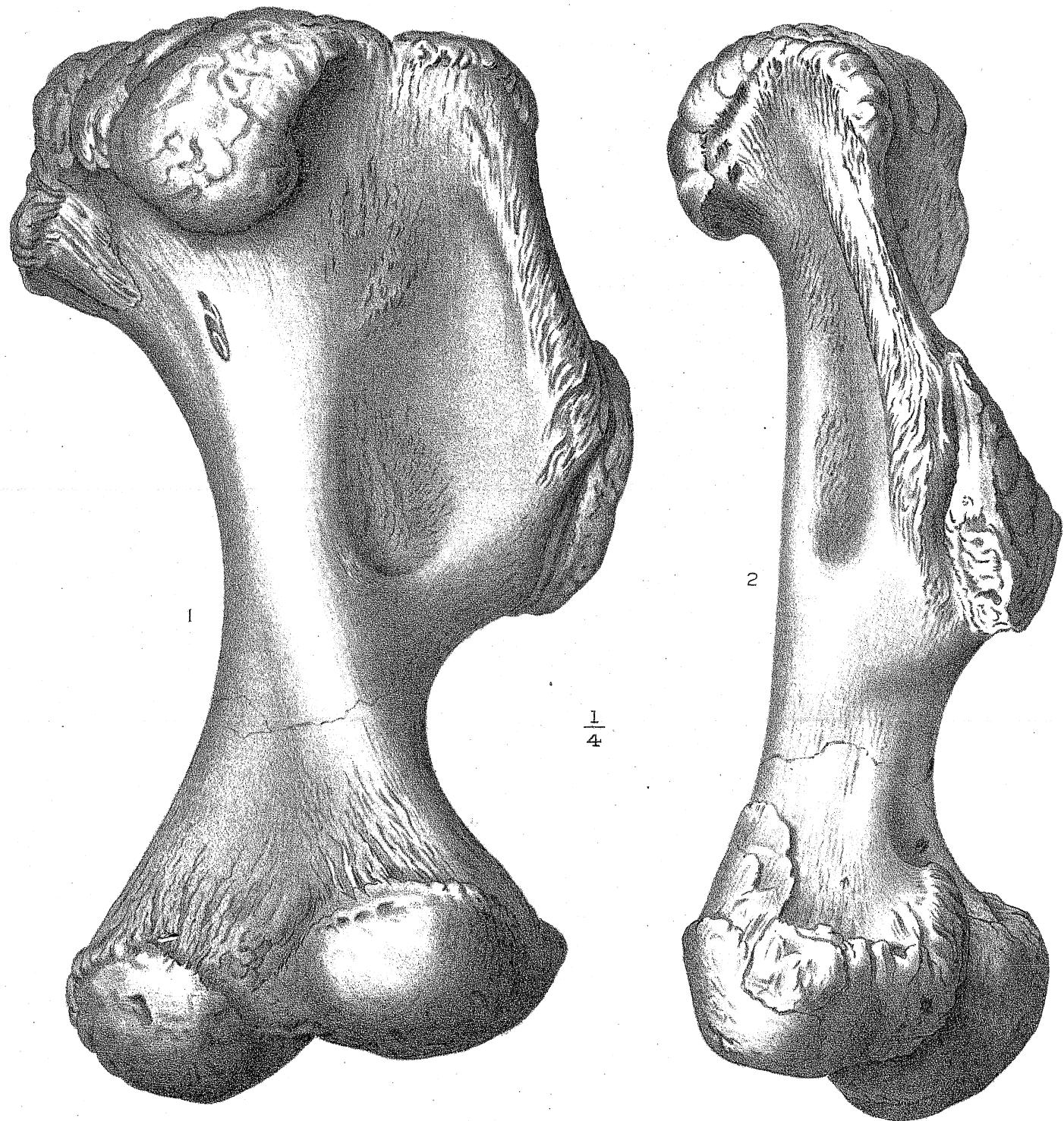
Specimen No. 4842, U. S. National Museum.

FIG. 1. Posterior view.

FIG. 2. External view.

One-fourth natural size.

220



TRICERATOPS PRORSUS, Marsh

## PLATE XII.

RIGHT HUMERUS OF TRICERATOPS PRORSUS MARSH.

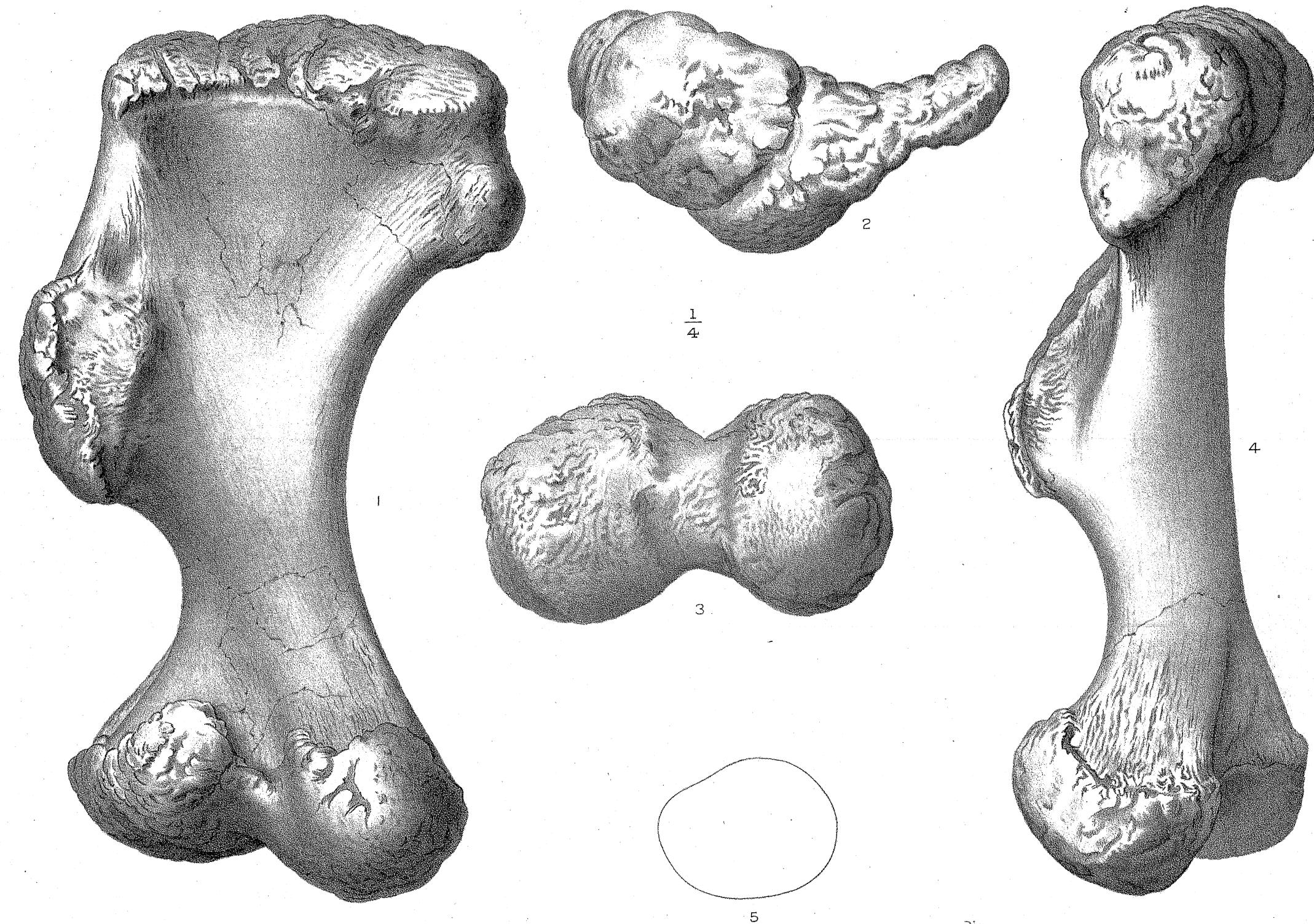
(See p. 60.)

Plate prepared under the direction of Marsh.

Specimen No. 4842, U. S. National Museum.

- FIG. 1. Anterior view.
- FIG. 2. Proximal view.
- FIG. 3. Distal view.
- FIG. 4. Internal view.
- FIG. 5. Section of shaft.

One-fourth natural size.



TRICERATOPS PRORSUS, Marsh

## PLATE XIII.

LEFT ULNA OF TRICERATOPS PRORSUS MARSH.

(See p. 60.)

Plate prepared under the direction of Marsh.

Specimen No. 4842, U. S. National Museum.

Fig. 1. Posterior view.

Fig. 2. Internal view.

Fig. 3. Proximal view.

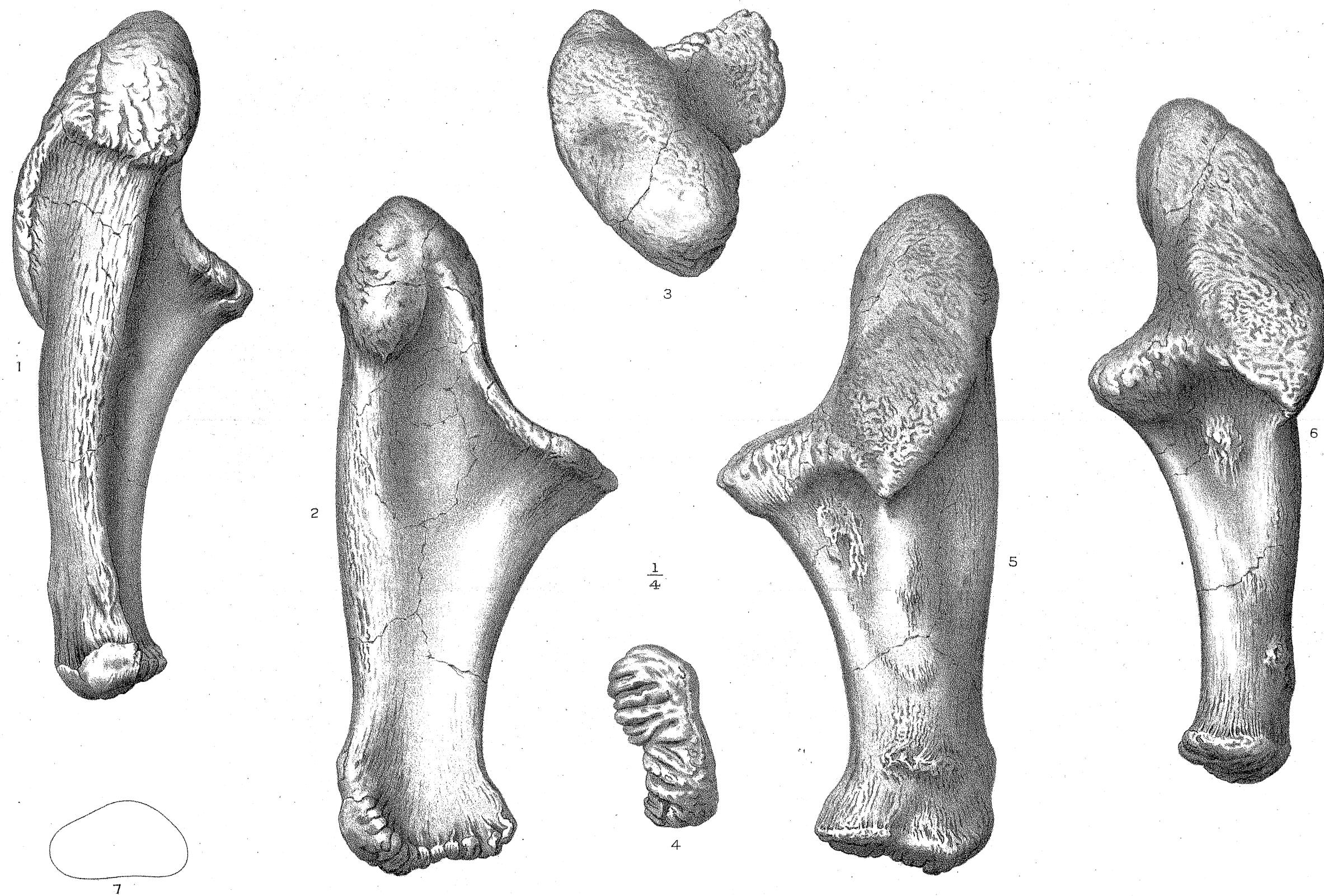
Fig. 4. Distal view.

Fig. 5. External view.

Fig. 6. Anterior view.

Fig. 7. Section of shaft.

One-fourth natural size.



## PLATE XIV.

### LEFT FEMUR OF TRICERATOPS PRORSUS MARSH.

(See p. 62.)

Plate prepared under the direction of Marsh.

Specimen No. 4842, U. S. National Museum.

FIG. 1. Anterior view.

FIG. 2. Proximal view.

FIG. 3. Posterior view.

FIG. 4. Distal view.

One-fourth natural size.



PLATE XV.

LEFT FEMUR OF TRICERATOPS PRORSUS MARSH.

(See p. 62.)

Plate prepared under the direction of Marsh.

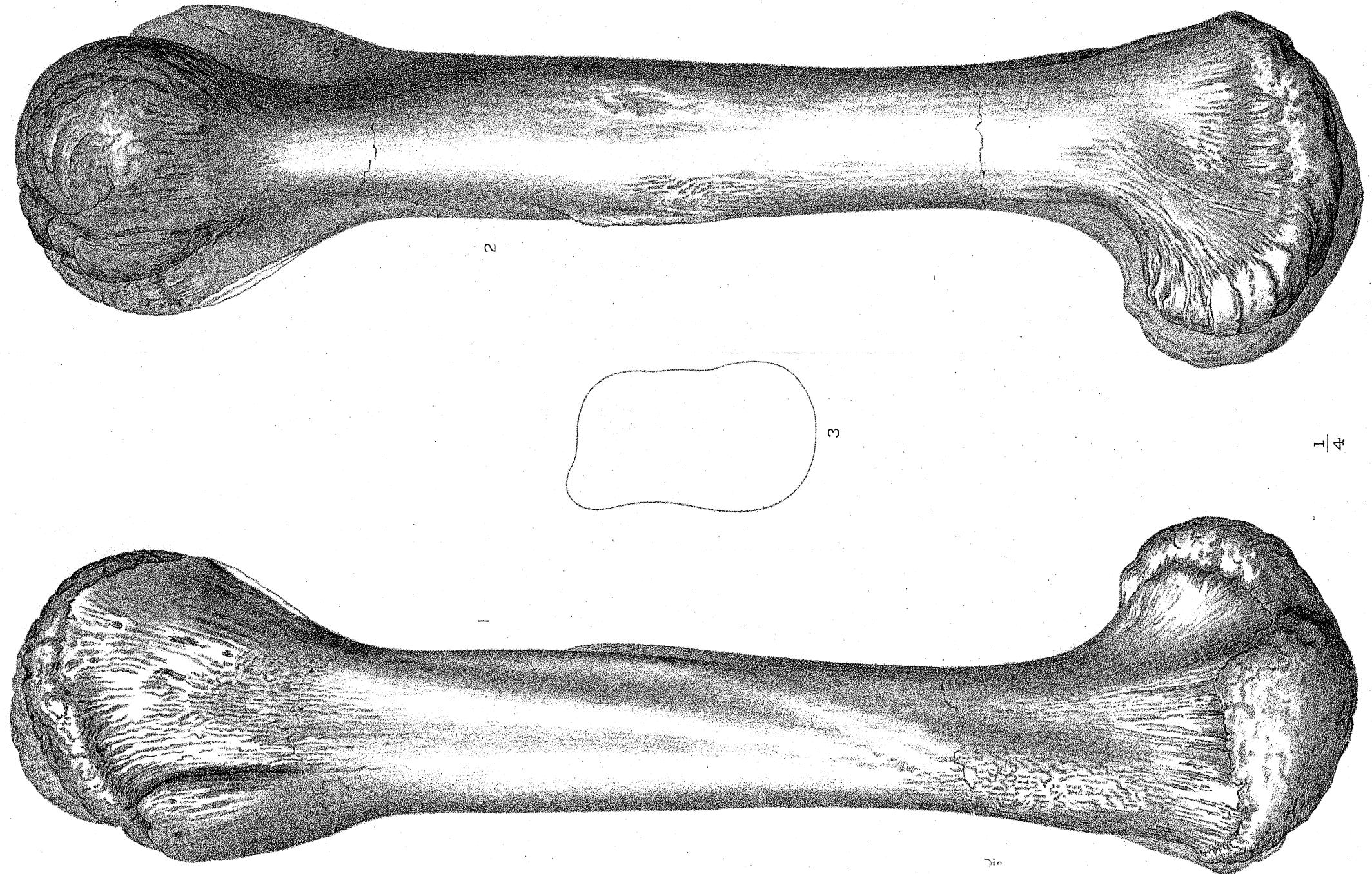
Specimen No. 4842, U. S. National Museum.

FIG. 1. External view.

FIG. 2. Internal view.

FIG. 3. Section of shaft.

One-fourth natural size.



## PLATE XVI.

LEFT TIBIA AND ASTRAGALUS (COOSSIFIED) OF TRICERATOPS PRORSUS  
MARSH.

(See p. 62.)

Plate prepared under the direction of Marsh.

Specimen No. 2082, Yale University Museum.

FIG. 1. Posterior view.

FIG. 2. Anterior view.

FIG. 3. Internal view.

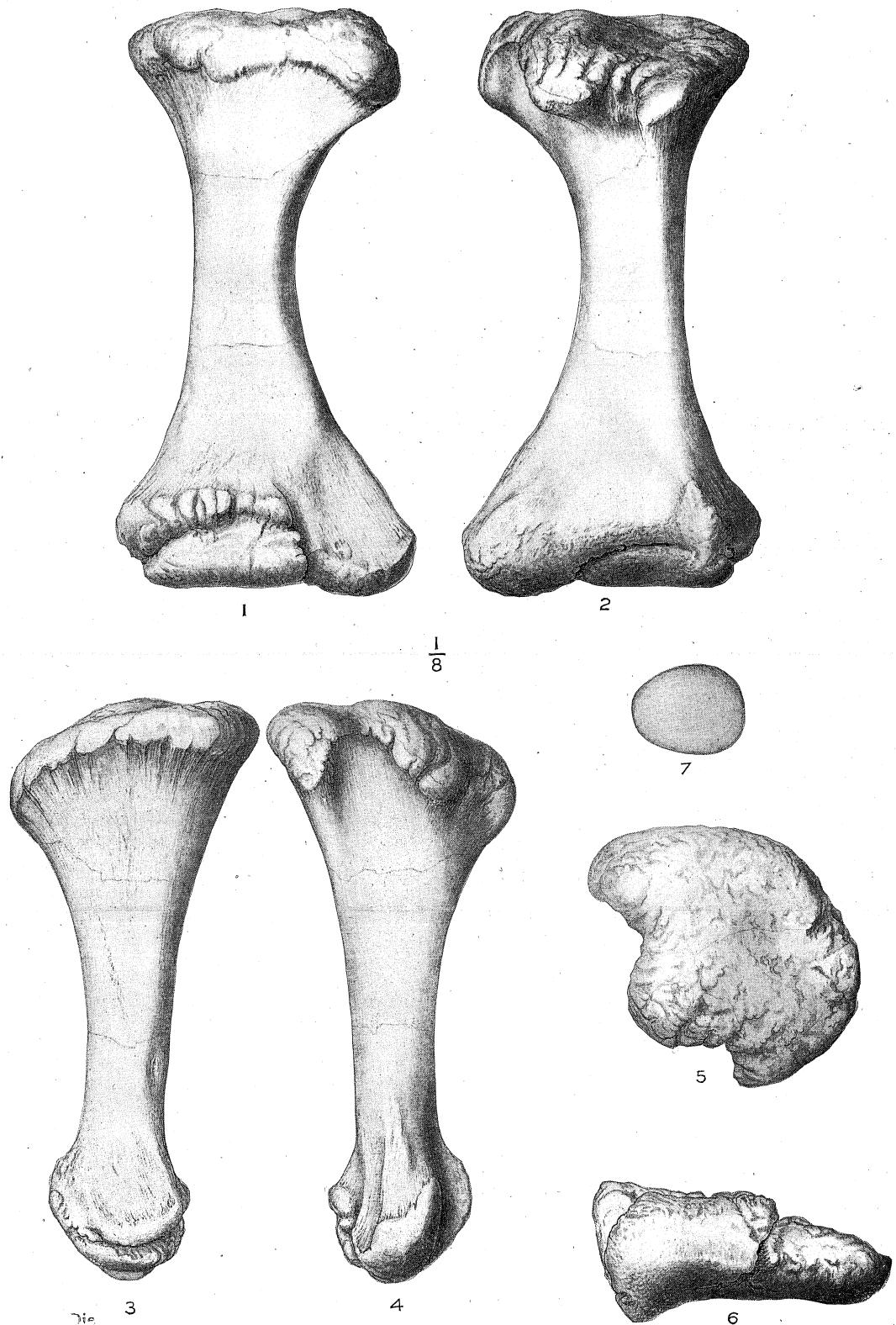
FIG. 4. External view.

FIG. 5. Proximal view.

FIG. 6. Distal view.

FIG. 7. Section of shaft.

One-eighth natural size.



TIBIA AND ASTRAGALUS OF TRICERATOPS PRORSUS MARSH.

## PLATE XVII.

### FOOT BONES OF TRICERATOPS.

(See pp. 61, 63-64.)

Plate prepared under the direction of Marsh.

Left metacarpal I, specimen in the U. S. National Museum.

- FIG. 1. Dorsal view.
- FIG. 2. External lateral view.
- FIG. 3. Palmar view.
- FIG. 4. Internal lateral view.
- FIG. 5. Proximal view.
- FIG. 6. Distal view.
- FIG. 7. Section of shaft.

Left metacarpal IV, specimen in the U. S. National Museum.

- FIG. 8. Dorsal view.
- FIG. 9. External lateral view.
- FIG. 10. Palmar view.
- FIG. 11. Internal lateral view.
- FIG. 12. Proximal view.
- FIG. 13. Distal view.
- FIG. 14. Section of shaft.

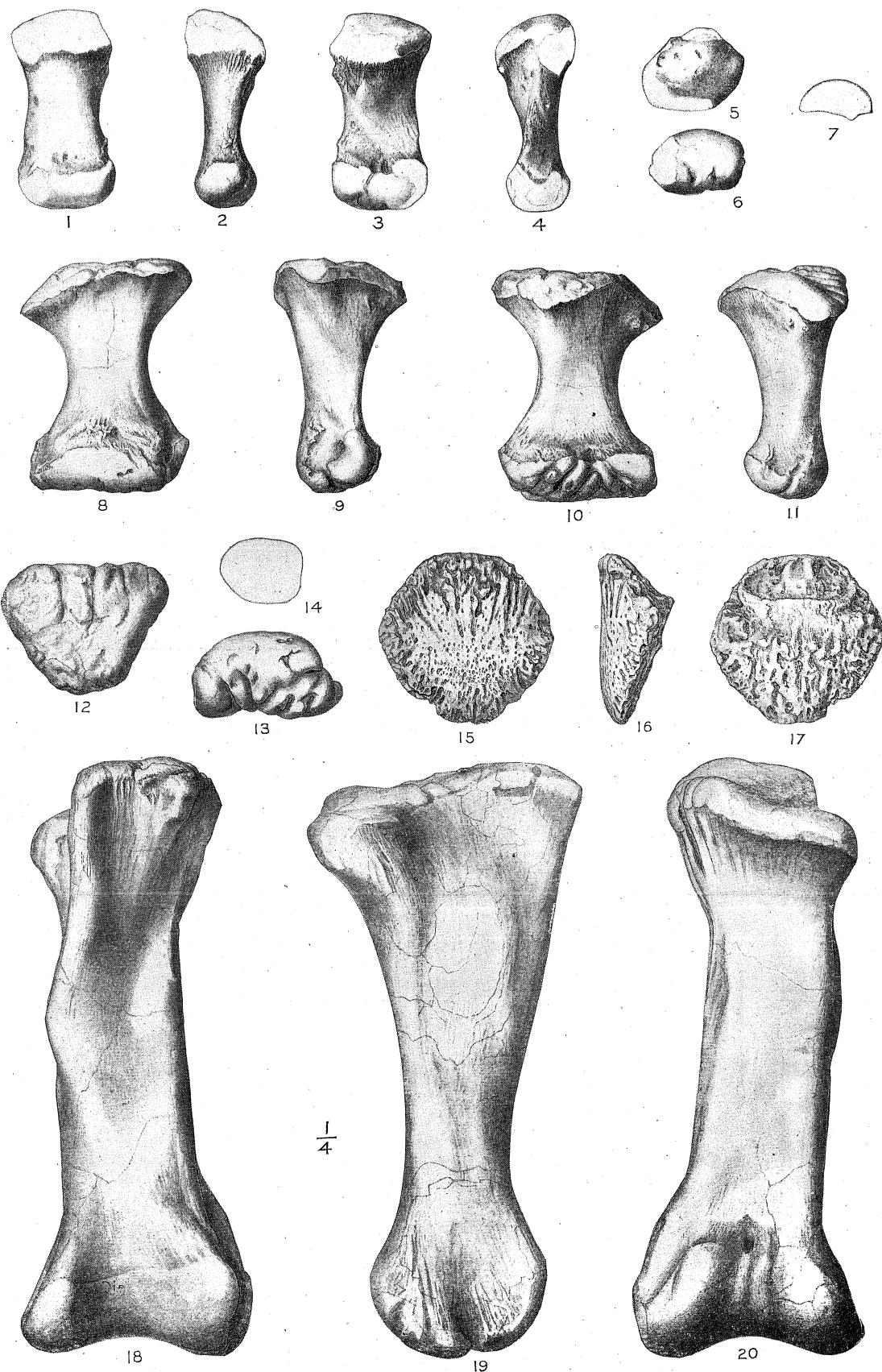
Metatarsal, specimen in the U. S. National Museum.

- FIG. 15. Anterior view.
- FIG. 16. Lateral view.
- FIG. 17. Posterior view.

Ungual phalanx from the pes, specimen in the U. S. National Museum.

- FIG. 18. Superior view.
- FIG. 19. Lateral view.
- FIG. 20. Inferior view.

All one-fourth natural size.



METACARPALS, METATARSALS, AND TERMINAL PHALANX OF TRICERATOPS PRORSUS  
AND T. HORRIDUS MARSH.

## PLATE XVIII.

### HORN CORES OF CERATOPS.

After the originals by Lambe.

#### NASAL HORN CORE OF CERATOPS.

(See p. 92.)

Specimen No. 190, Canadian Geological Survey collection.

FIG. 1. Right aspect.

FIG. 2. Sectional outlines at *a* and *b*.

One-half natural size.

#### RIGHT SUPRAORBITAL HORN CORE OF TYPE OF CERATOPS CANADENSIS LAMBE.

(See p. 94.)

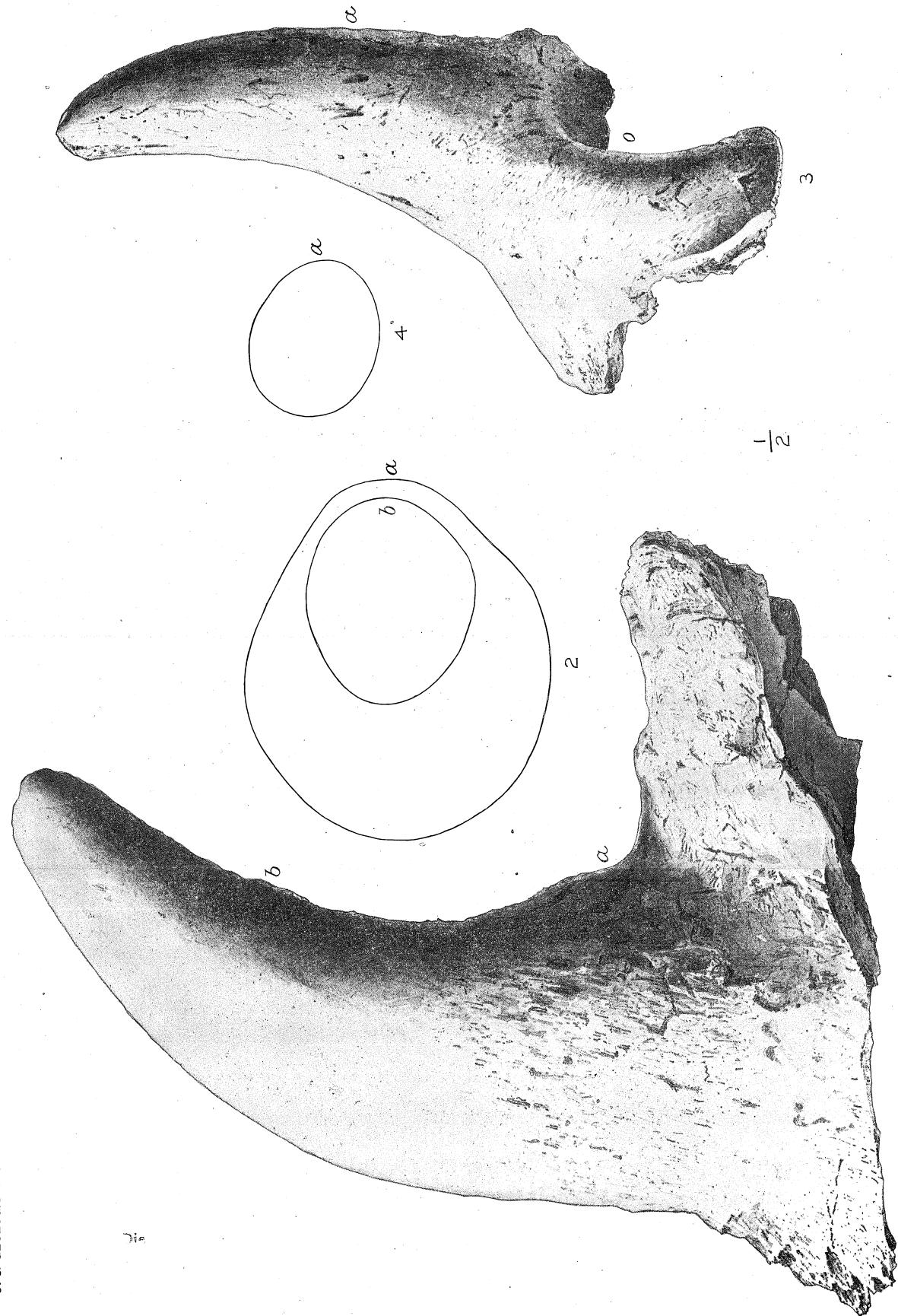
Specimen No. 1254, Canadian Geological Survey collection.

FIG. 3. Oblique rear view.

FIG. 4. Sectional outline at *a*.

*o*, Orbit.

One-half natural size.



HORN CORES OF CERATOPS.

## PLATE XIX.

### RAMUS AND TEETH OF CERATOPS CANADENSIS LAMBE.

After the originals by Lambe

#### RIGHT MANDIBULAR RAMUS.

(See p. 94.)

Specimen No. 284, Canadian Geological Survey collection.

FIG. 1. External view.

FIG. 2. Internal view.

a, Alveolar groove; b, symphyseal surface; c, mandibular groove; e, coronoid process; f, dentary-predentary facet.

One-half natural size.

#### MAXILLARY TOOTH.

(See p. 95.)

(Provisionally associated with *Ceratops canadensis* Lambe.)

FIG. 3. External view.

FIG. 4. Internal view.

Natural size.

#### MANDIBULAR TOOTH.

(See p. 95.)

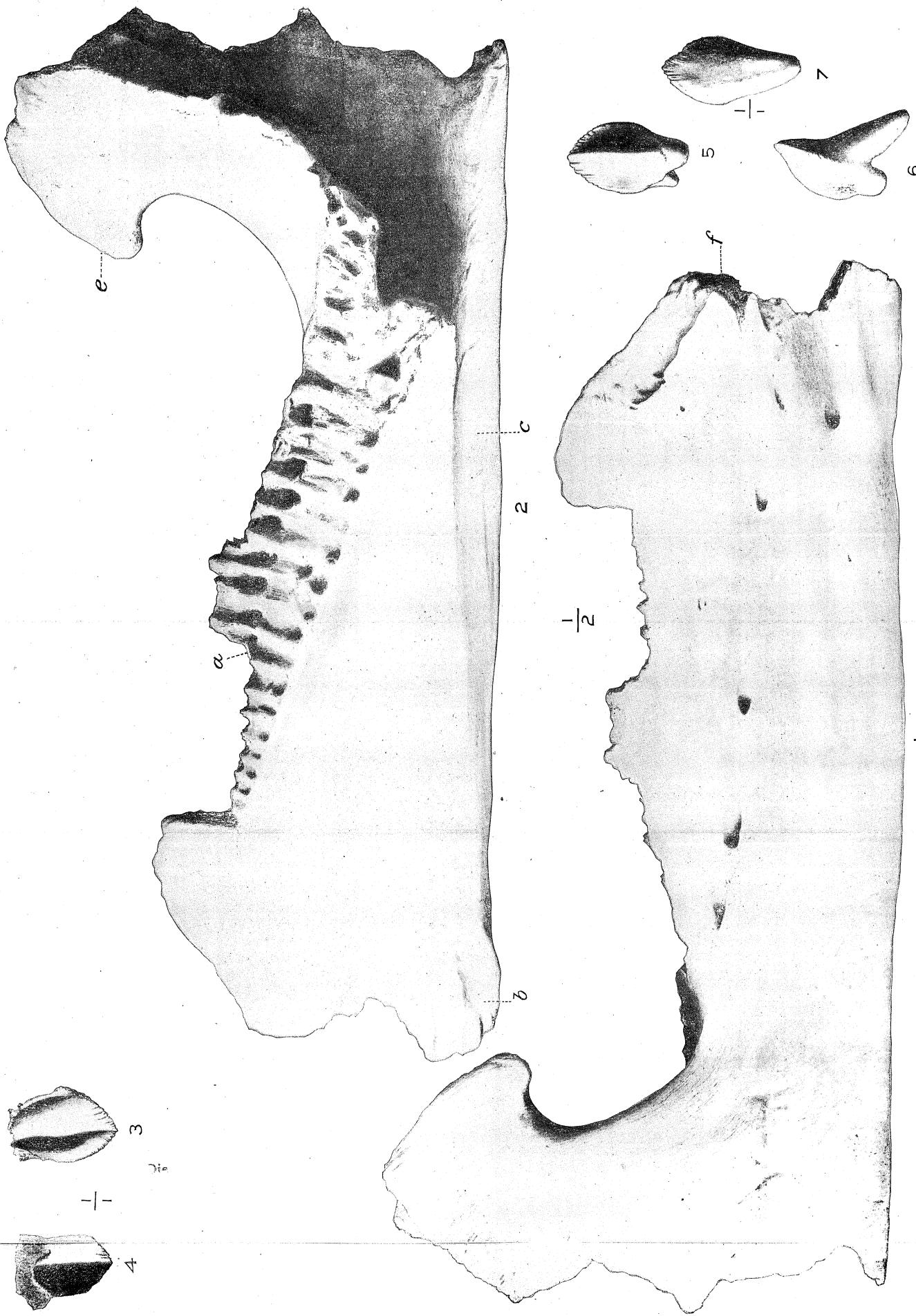
(Provisionally associated with *Ceratops canadensis* Lambe.)

FIG. 5. Internal view.

FIG. 6. Lateral view, showing divided fang.

FIG. 7. External view.

Natural size.



LOWER JAW AND TEETH OF CERATOPS CANADENSIS LAMBE.

## PLATE XX.

### SCAPULA AND CORACOID AND PREDENTARY BONE OF MONOCLONIUS DAWSONI? LAMBE.

#### LEFT SCAPULA AND CORACOID.

(See p. 90.)

After the original by Lambe.

(Provisionally associated with *Monodonius dawsoni* Lambe.)

Specimen No. 506, Canadian Geological Survey collection.

FIG. 1. Internal view.

One-fourth natural size.

#### PREDENTARY BONE.

(See p. 91.)

After the originals by Lambe.

(Provisionally associated with *Monodonius dawsoni*.)

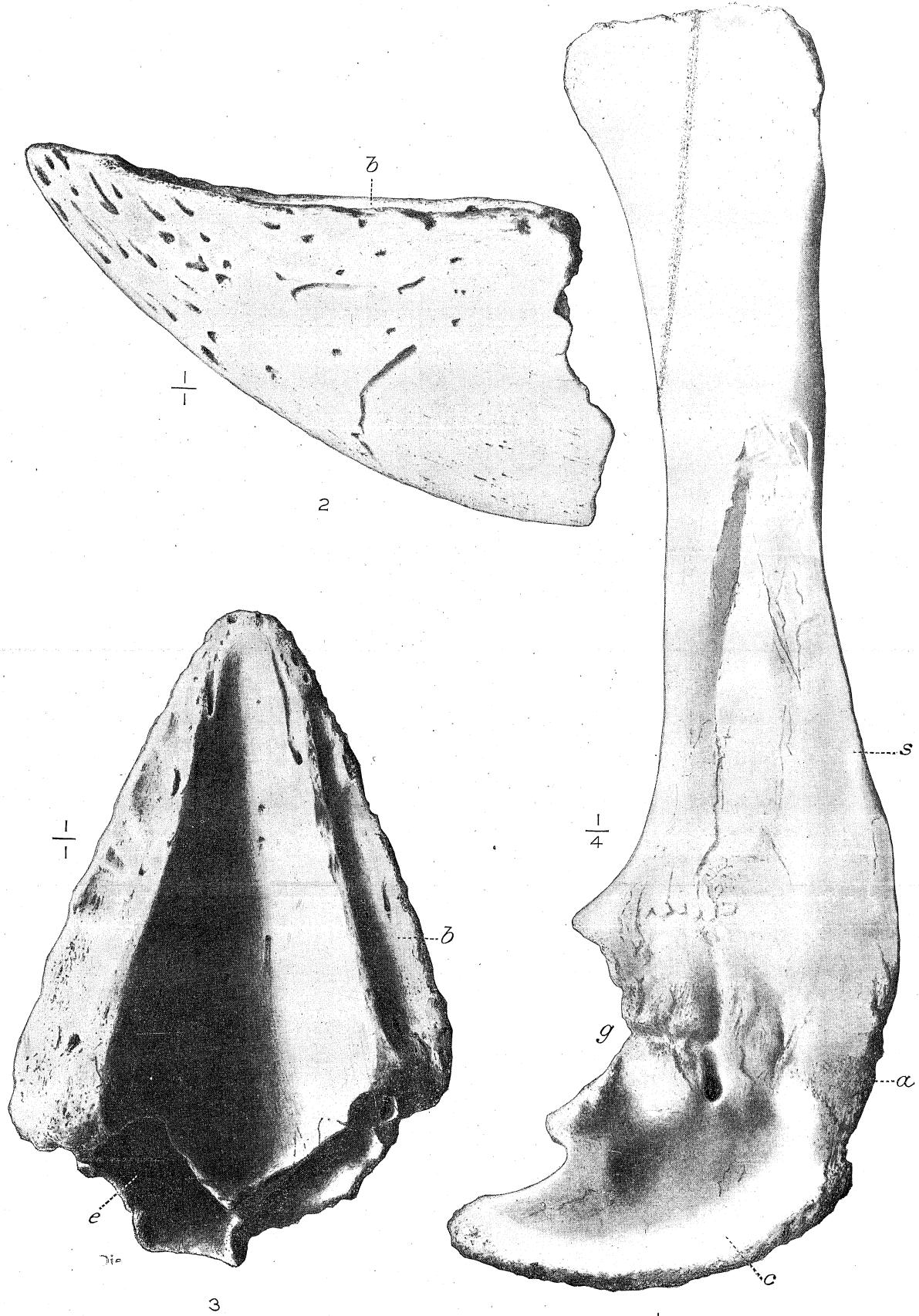
Specimen in the Canadian Geological Survey collection

FIG. 2. Left lateral view.

FIG. 3. Superior view.

Natural size.

a, Suture between scapula and coracoid; b, upper border; c, coracoid; e, groove for dentary;  
g, glenoid fossa; s, scapula.

SCAPULA AND CORACOID AND PREDENTARY BONE OF ?*MONOCLONIUS DAWSONI* LAMBE.

## PLATE XXI.

PARIETAL ELEMENT OF CREST OF TYPE OF CERATOPS BELLII LAMBE.

(See p. 96.)

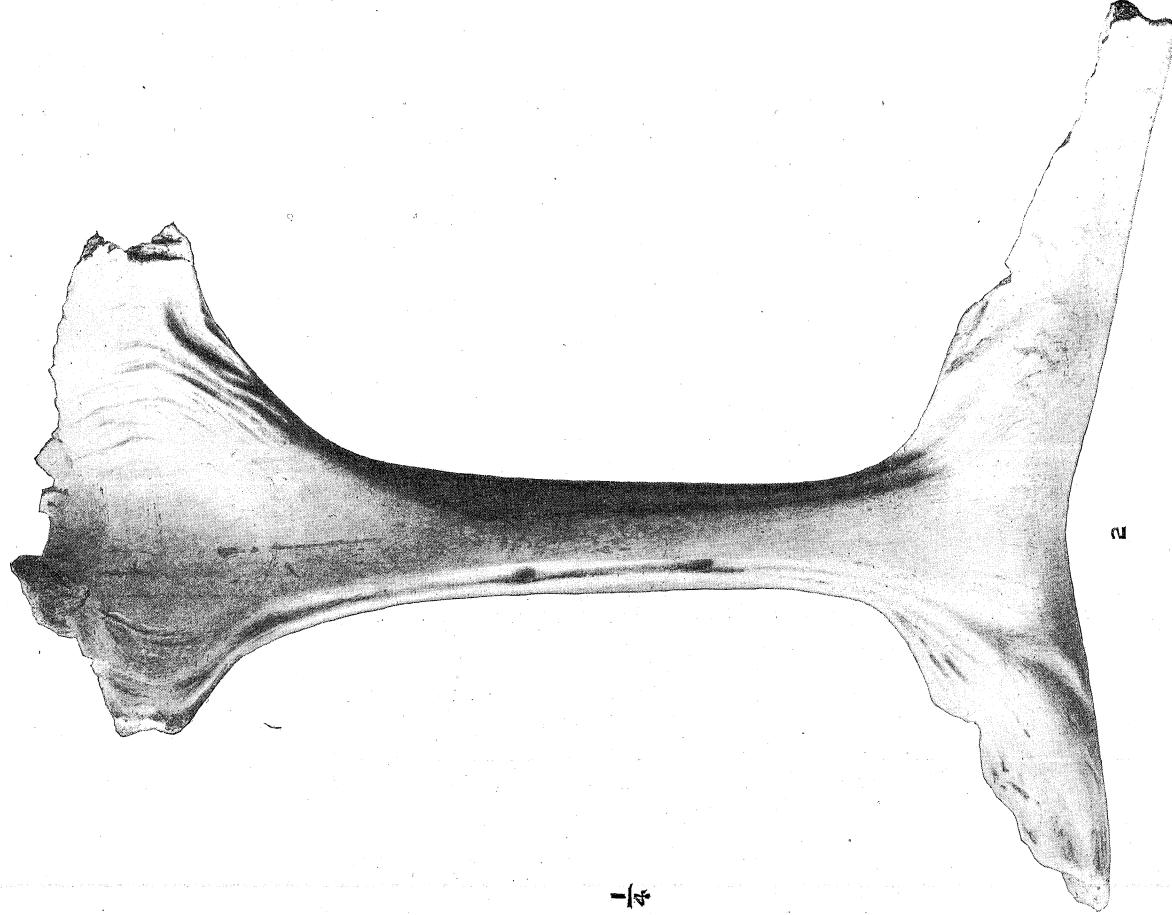
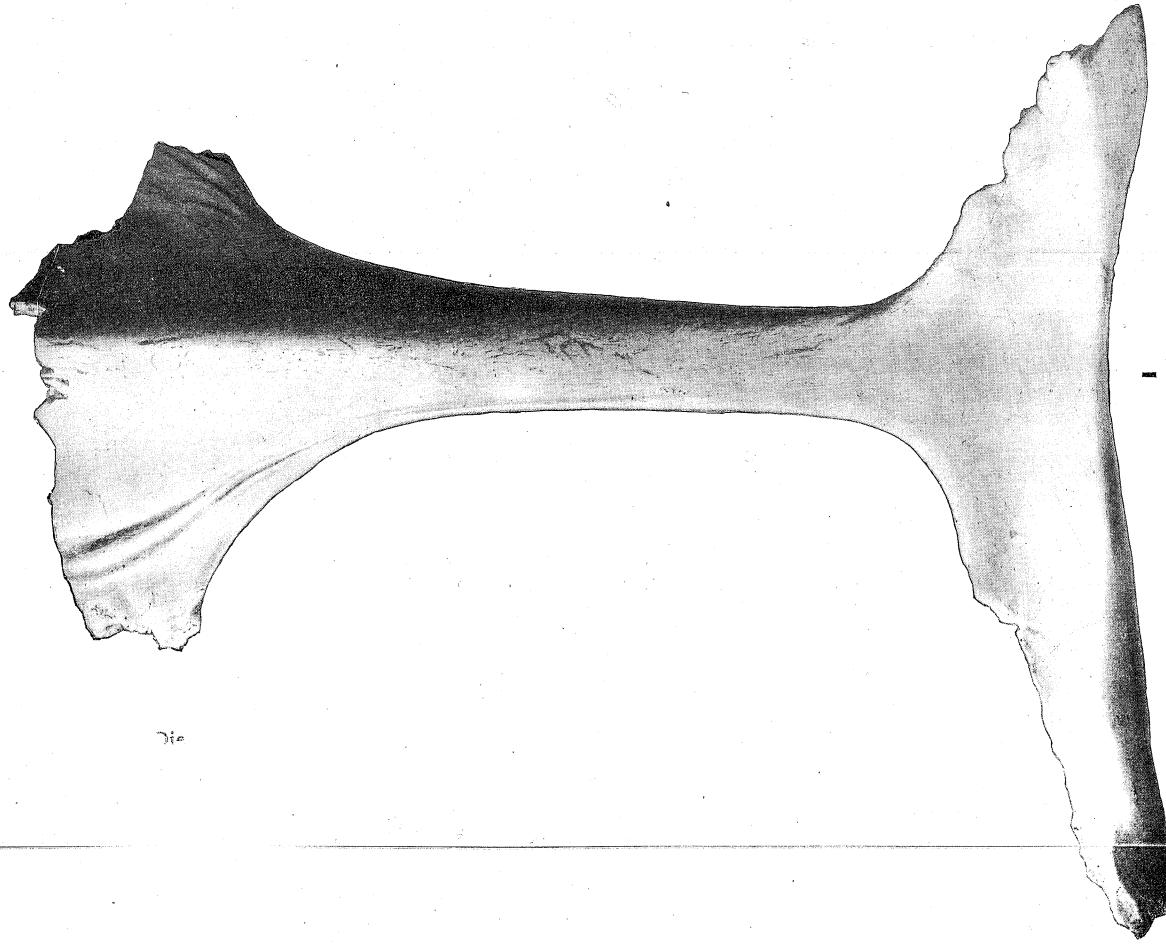
After the originals by Lambe.

Specimen No. 491, Canadian Geological Survey collection.

FIG. 1. Superior view.

FIG. 2. Inferior view.

One-fourth natural size.



PARIETAL OF CREST OF CERATOPS BELLII LAMBE.

## PLATE XXII.

SUPERIOR PORTION OF OCCIPITAL, PARIETAL, AND FRONTAL SEGMENTS OF SKULL, WITH COALESCED DERMAL OSSIFICATIONS, OF STEGOCERAS.

(See p. 97.)

After the originals by Lambe.

*Stegoceras validus* Lambe. Type specimen, No. 515, Canadian Geological Survey Collection.

FIG. 1. Lateral aspect.

FIG. 2. Inferior view.

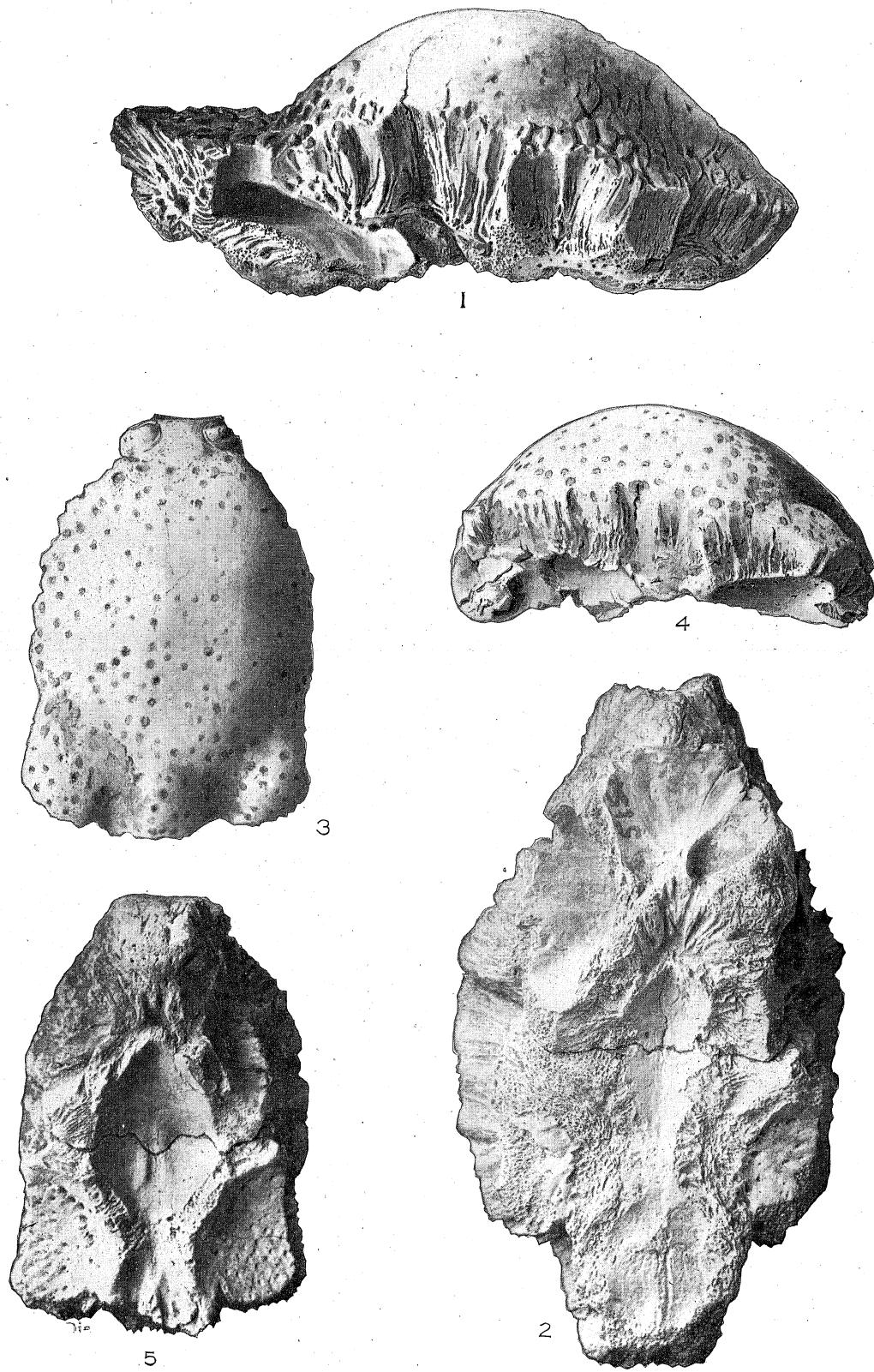
*Stegoceras validus* Lambe. Specimen No. 1423, Canadian Geological Survey Collection.

FIG. 3. Superior view.

FIG. 4. Lateral view.

FIG. 5. Inferior view.

Natural size.



SUPERIOR PORTION OF OCCIPITAL, pariETAL, AND FRONТАL SEGMENTS OF  
SKULL OF STEGOCERAS LAMBE.

## PLATE XXIII.

### ELEMENTS OF POSTERIOR CREST OF TYPE OF CERATOPS CANADENSIS LAMBE.

After the original by Lambe.

(See p. 94.)

Specimen No. 1254, Canadian Geological Survey collection.

FIG. 1. Superior view of right squamosal.

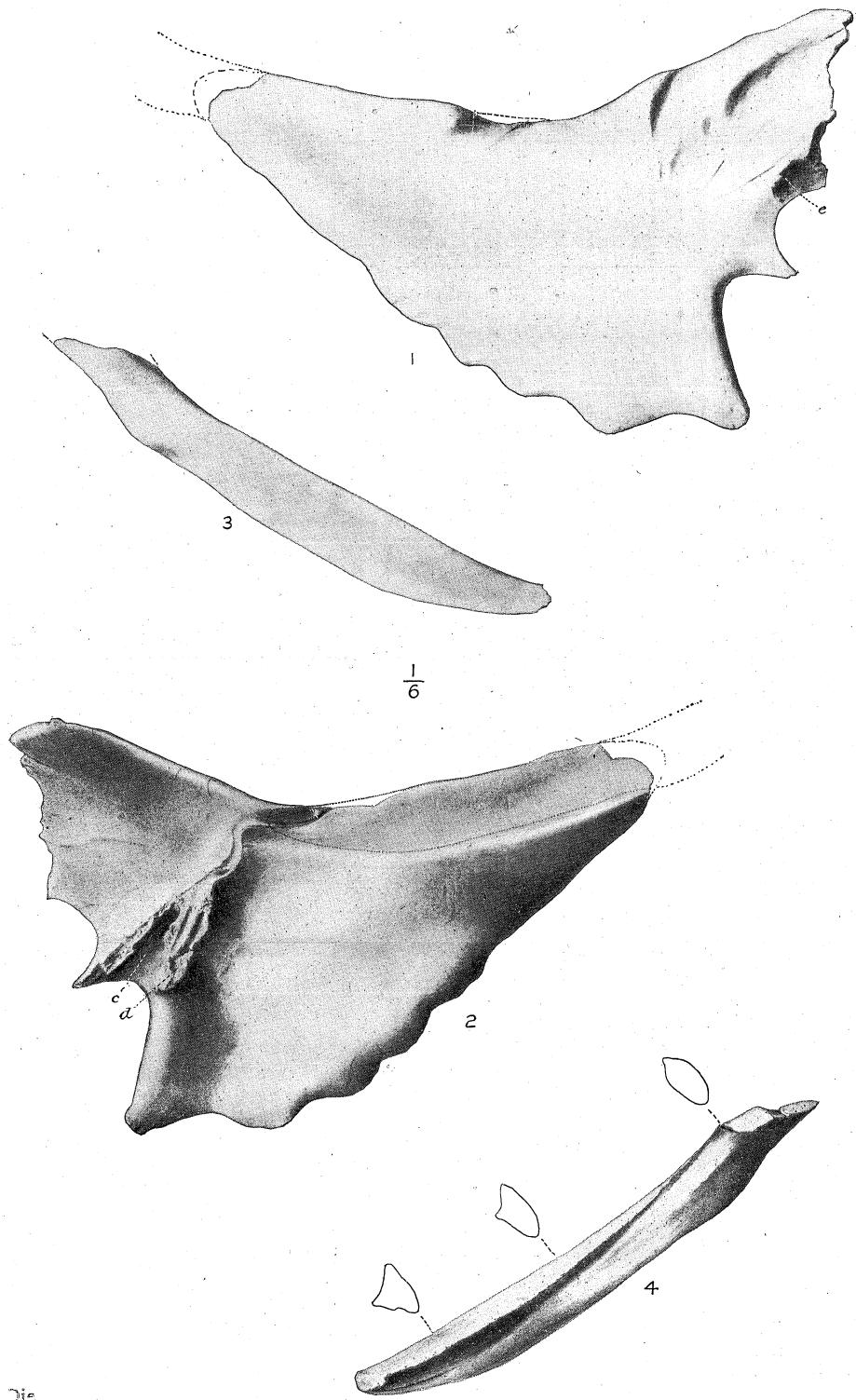
FIG. 2. Inferior view.

FIG. 3. Upper surface of front end of right lateral posterior extension of parietal.

FIG. 4. Lower surface.

c, Pit for process of quadrate; d, surface for articulation with exoccipital; e, surface for contact with jugal.

One-sixth natural size.



PARTS OF CREST OF CERATOPS CANADENSIS LAMBE.

## PLATE XXIV.

### TYPE OF CENTROSAURUS APERTUS LAMBE.

(See p. 93.)

After the original by Lambe.

Specimen N<sup>o</sup>. 971, Canadian Geological Survey collection.

FIG. 1. Dorsal view of parietal crest.

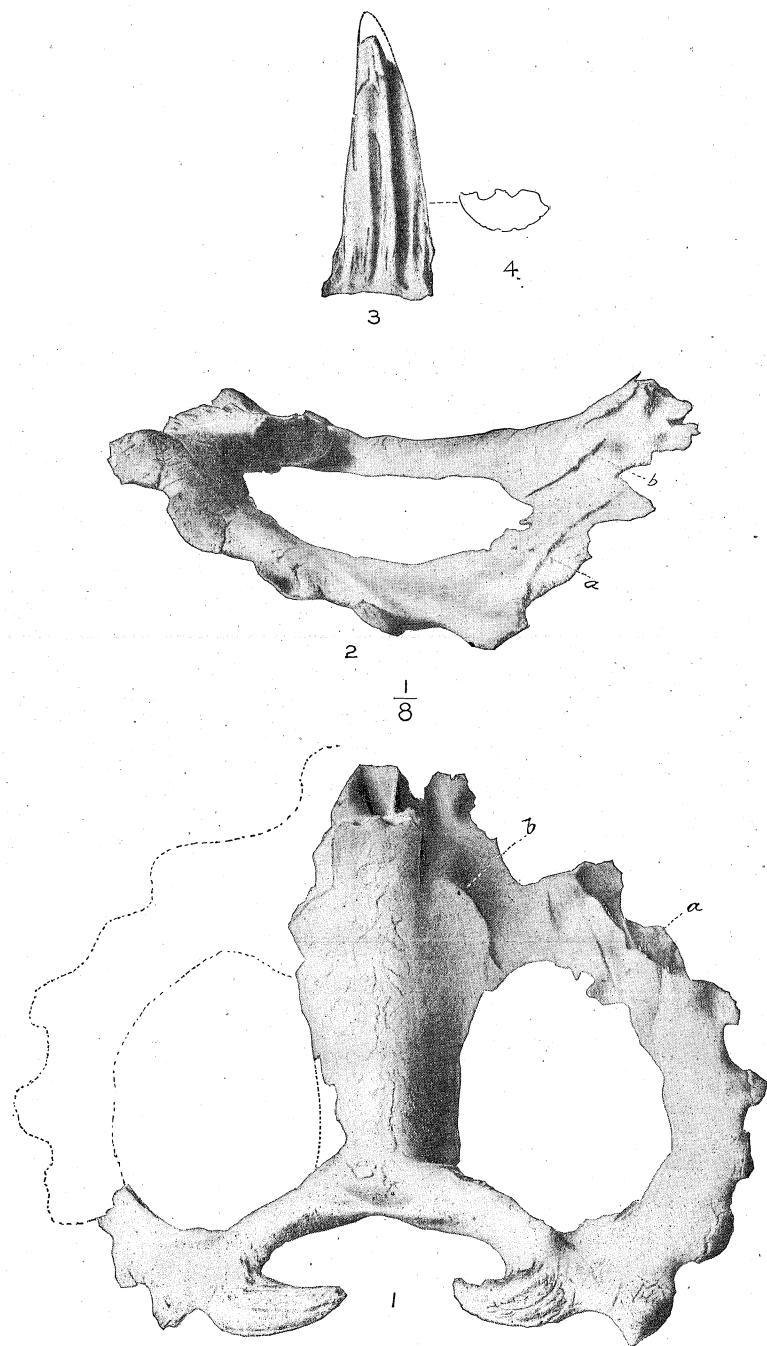
FIG. 2. Right lateral view.

FIG. 3. Lateral view of nasal horn core.

FIG. 4. Section of horn core.

a, Parieto-squamosal suture; b, parieto-frontal suture.

One-eighth natural size.



PARIETAL CREST AND NASAL HORN CORE OF CENTROSAURUS  
APERTUS LAMBE.

## PLATE XXV.

### TYPE OF AGATHAUMAS SYLVESTRIS COPE.

(See p. 106.)

After the original by Cope.

Specimen No. 4000, American Museum of Natural History.

FIGS. 1-16. Lateral views of presacral and sacral vertebrae.

FIG. 7c. Anterior view of seventh vertebra.

FIG. 7d. Posterior view.

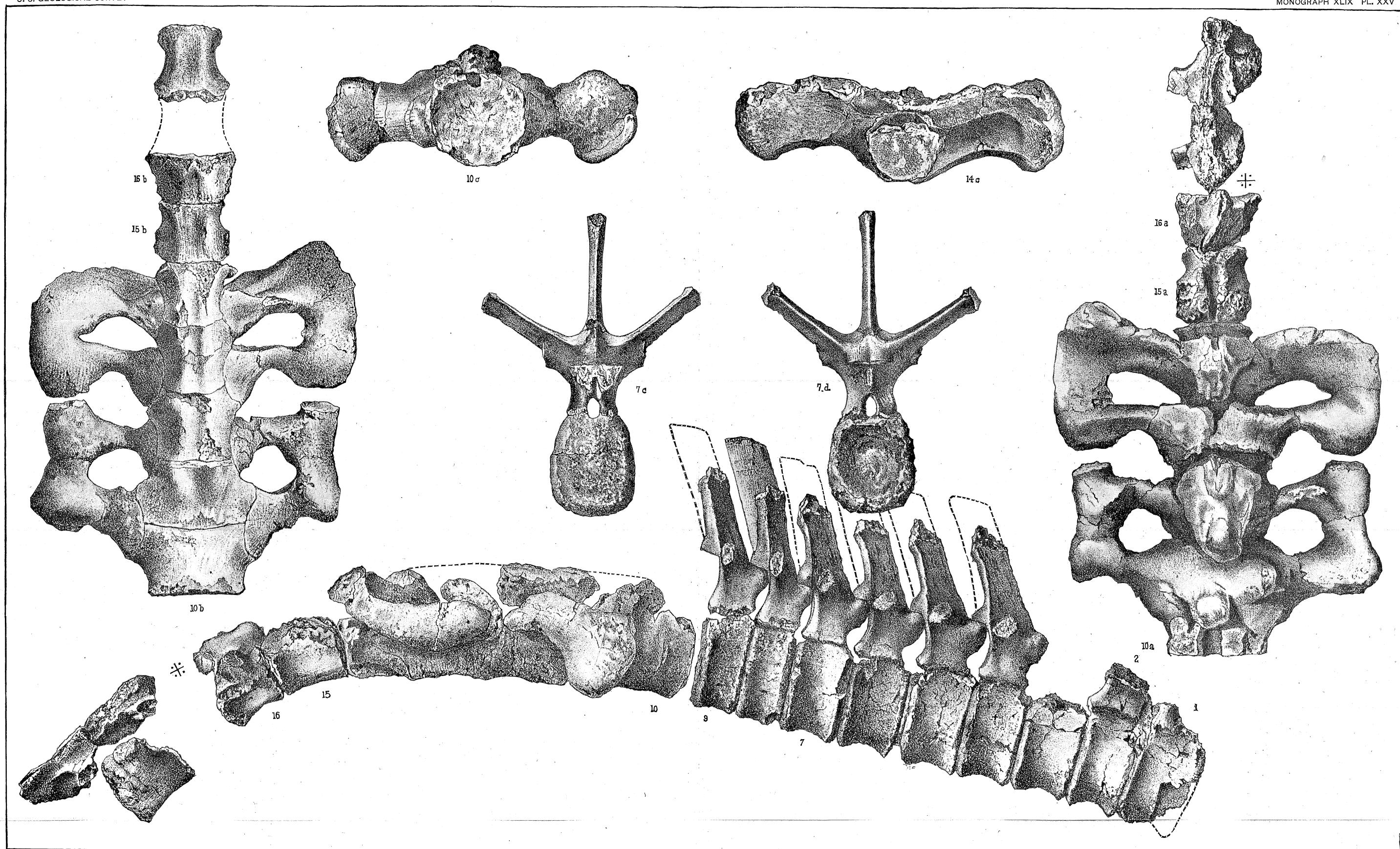
FIGS. 10a-16a. Dorsal view of sacrum.

FIGS. 10b-16b. Ventral view.

FIG. 10c. Proximal end.

FIG. 14c. Distal end of fifth sacral vertebra.

One-sixth natural size.



VERTEBRA AND SACRUM OF AGATHAUMAS SYLVESTRIS COPE.

## PLATE XXVI.

### TYPE OF TRICERATOPS HORRIDUS MARSH.

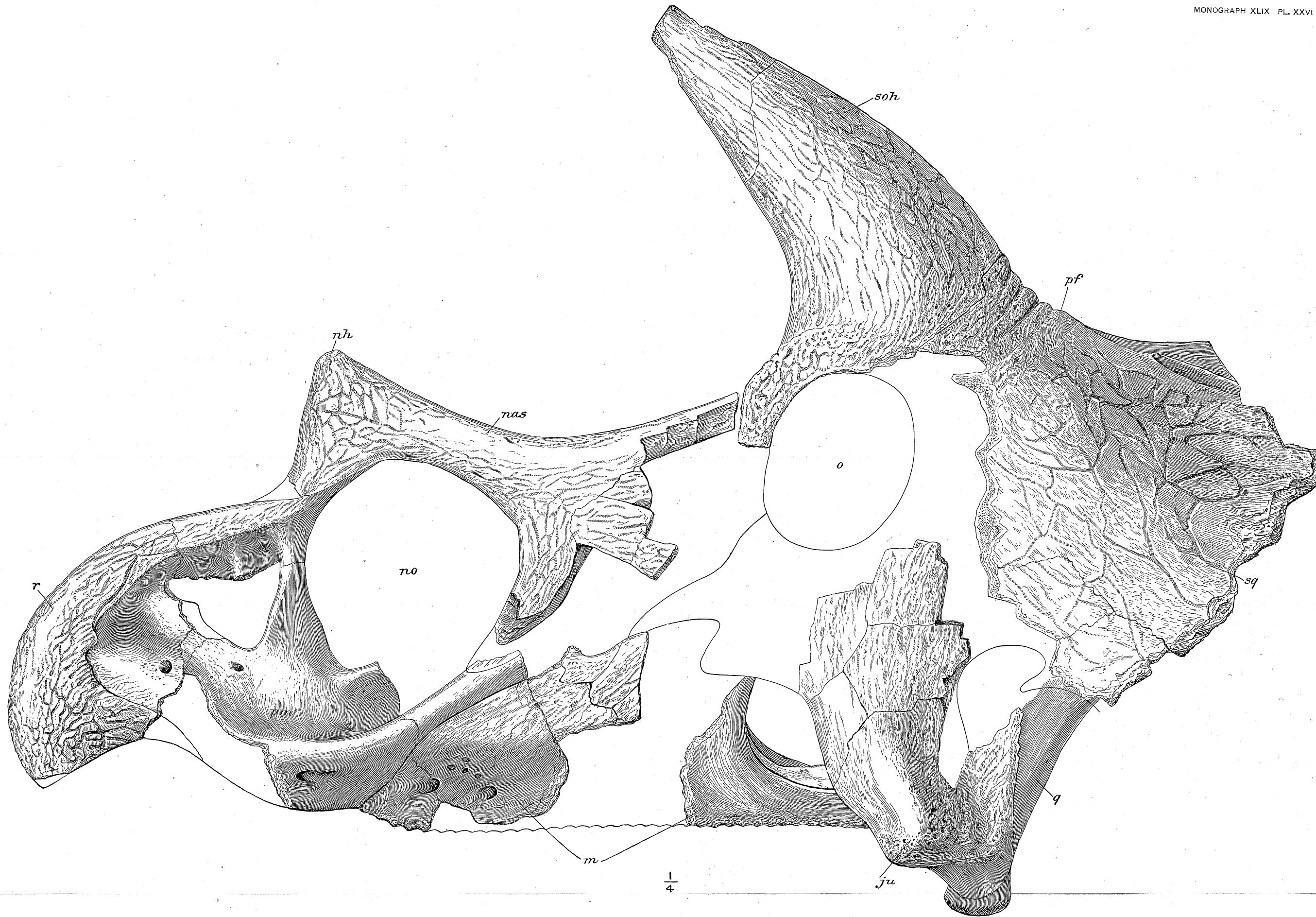
(See p. 118.)

Plate prepared under the direction of Hatcher.

Specimen No. 1820, Yale University Museum. Left lateral view of anterior portion of the skull.

<i>ju</i> , jugal.	<i>pf</i> , postfrontal.
<i>m</i> , maxillary.	<i>pm</i> , premaxillary.
<i>nas</i> , nasal.	<i>q</i> , quadrate.
<i>nh</i> , nasal horn.	<i>r</i> , rostral bone.
<i>no</i> , nasal opening.	<i>soh</i> , supraorbital horn.
<i>o</i> , orbit.	<i>sq</i> , squamosal.

One-fourth natural size.



SKULL OF TRICERATOPS HORRIDUS MARSH.

## PLATE XXVII.

### SKULL OF TYPE OF TRICERATOPS SERRATUS MARSH.

(See p. 122.)

Plate prepared under the direction of Marsh.

Type specimen, No. 1823, Yale University Museum. Left lateral view.

<i>ang</i> ,	angular.	<i>o</i> ,	orbit.
<i>art</i> ,	articular.	<i>pa</i> ,	parietal.
<i>cp</i> ,	coronoid process.	<i>pd</i> ,	predentary.
<i>d</i> ,	dentary.	<i>pf</i> ,	postfrontal.
<i>ej</i> ,	epijugal.	<i>prf</i> ,	prefrontal.
<i>ep</i> ,	epoccipital.	<i>q</i> ,	quadrate.
<i>j</i> ,	jugal.	<i>qj</i> ,	quadratojugal.
<i>lac</i> ,	lachrymal.	<i>r</i> ,	rostral.
<i>mx</i> ,	maxillary.	<i>sang</i> ,	surangular.
<i>nas</i> ,	nasal.	<i>soh</i> ,	supraorbital horn core.
<i>no</i> ,	nasal opening.	<i>sq</i> ,	squamosal.

One-fourth natural size.



## PLATE XXVIII.

### SKULL OF TYPE OF TRICERATOPS SERRATUS MARSH.

(See p. 122.)

Plate prepared under the direction of Marsh

Type specimen, No. 1823, Yale University Museum. Superior view.

*ep*, epoccipital.

*pa*, parietal.

*ej*, epijugal.

*pf*, postfrontal.

*f*, frontal.

*prf*, prefrontal.

*j*, jugal.

*pma*, premaxillary

*mx*, maxillary.

*r*, rostral.

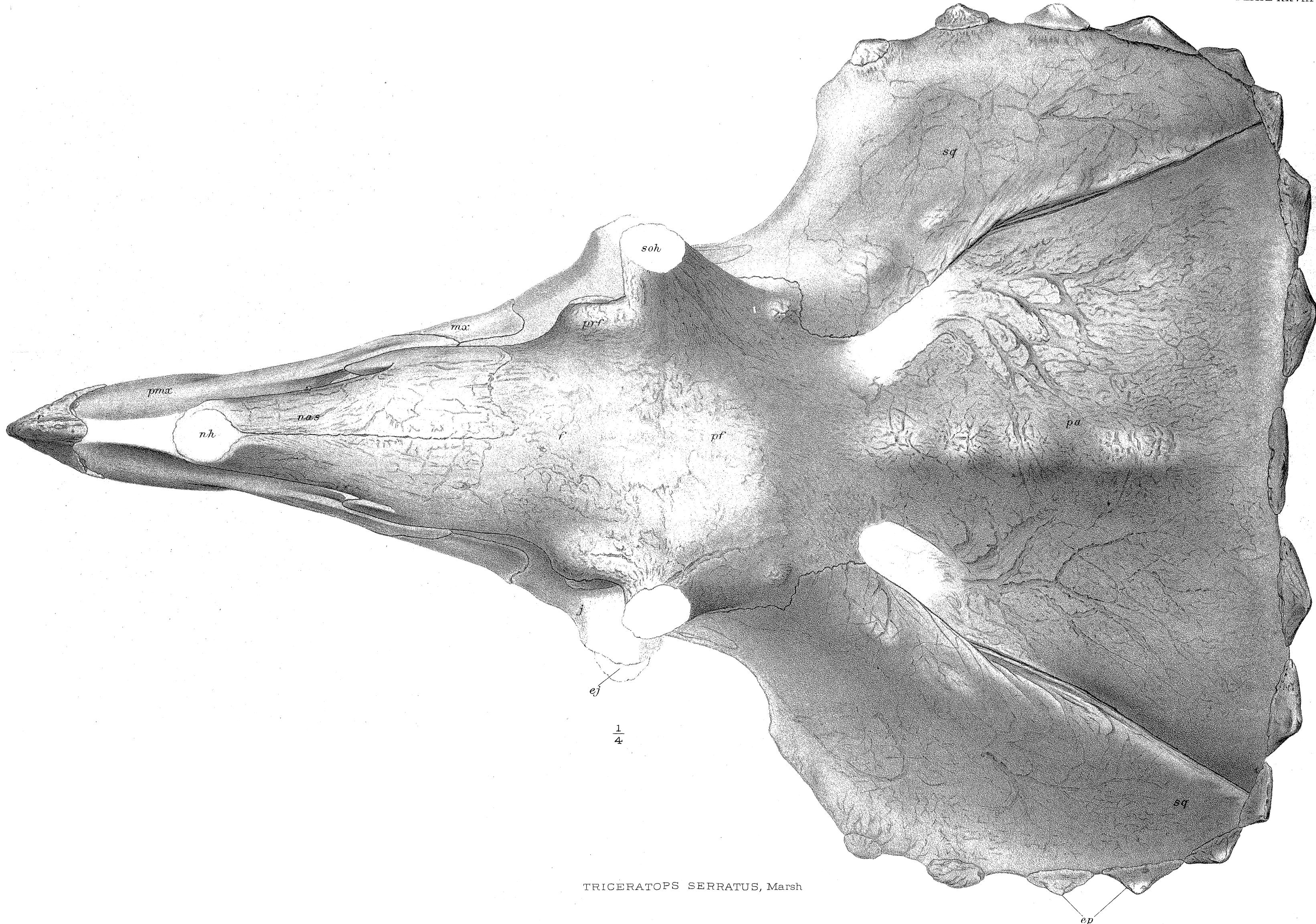
*nas*, nasal.

*sq*, squamosal.

*nh*, surface for articulation of nasal horn core.

*soh*, supraorbital horn core.

One-fourth natural size.



TRICERATOPS SERRATUS, Marsh

## PLATE XXIX.

### SKULL OF TYPE OF TRICERATOPS SERRATUS MARSH.

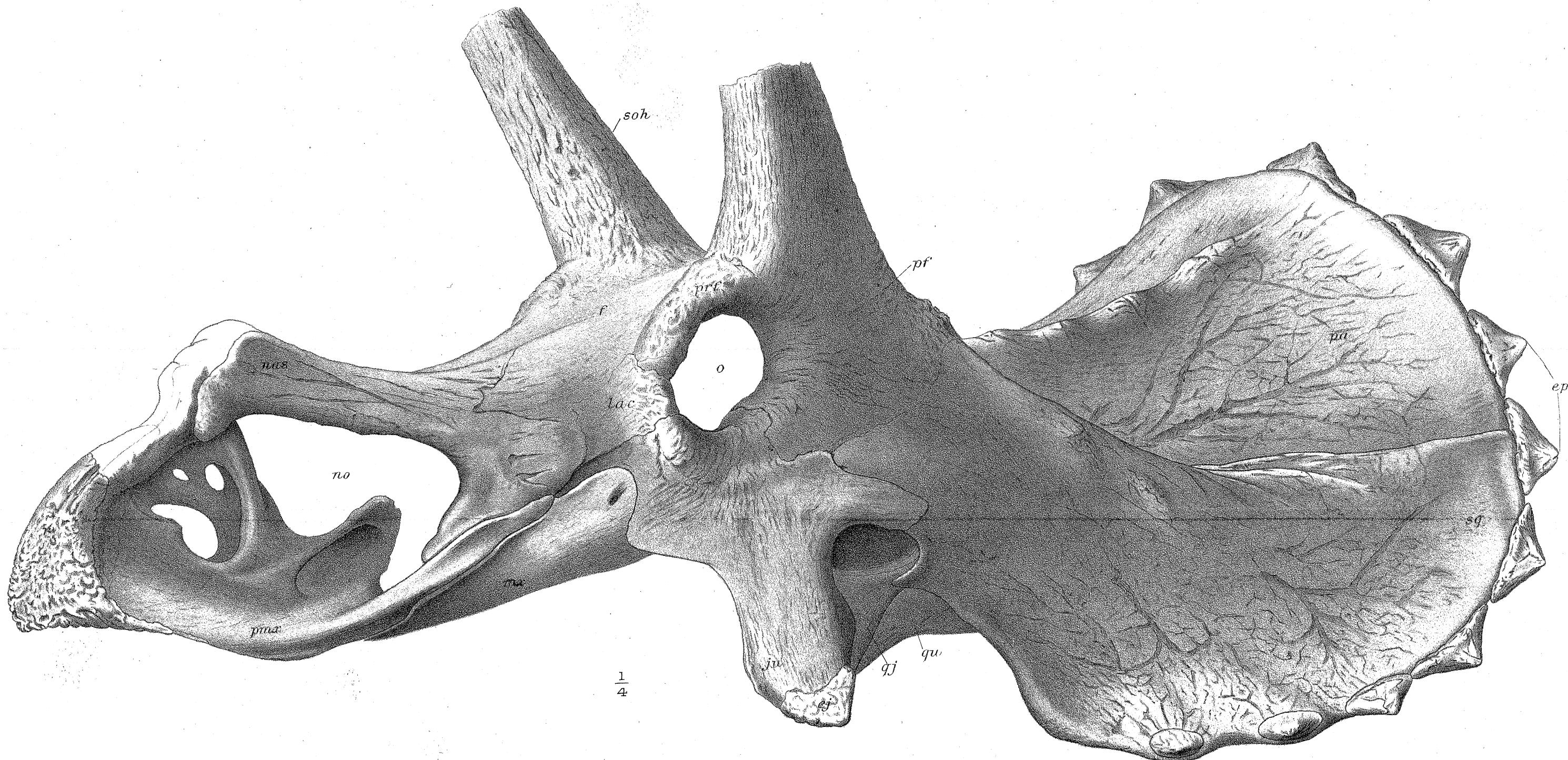
(See p. 122.)

Plate prepared under the direction of Marsh.

Type specimen, No. 1823, Yale University Museum. Oblique front view.

<i>ep</i> , epoccipital.	<i>pf</i> , postfrontal.
<i>ej</i> , epijugal.	<i>prf</i> , prefrontal.
<i>f</i> , frontal.	<i>pmx</i> , premaxillary.
<i>ju</i> , jugal.	<i>qj</i> , quadratojugal.
<i>mx</i> , maxillary.	<i>r</i> , rostral.
<i>nas</i> , nasal.	<i>qu</i> , quadrate.
<i>no</i> , nasal opening.	<i>sq</i> , squamosal.
<i>o</i> , orbit.	<i>soh</i> , supraorbital horn core.
<i>pa</i> , parietal.	

One-fourth natural size.



TRICERATOPS SERRATUS Marsh

P L A T E   X X X .

SKULL OF TRICERATOPS PRORSUS? MARSH.

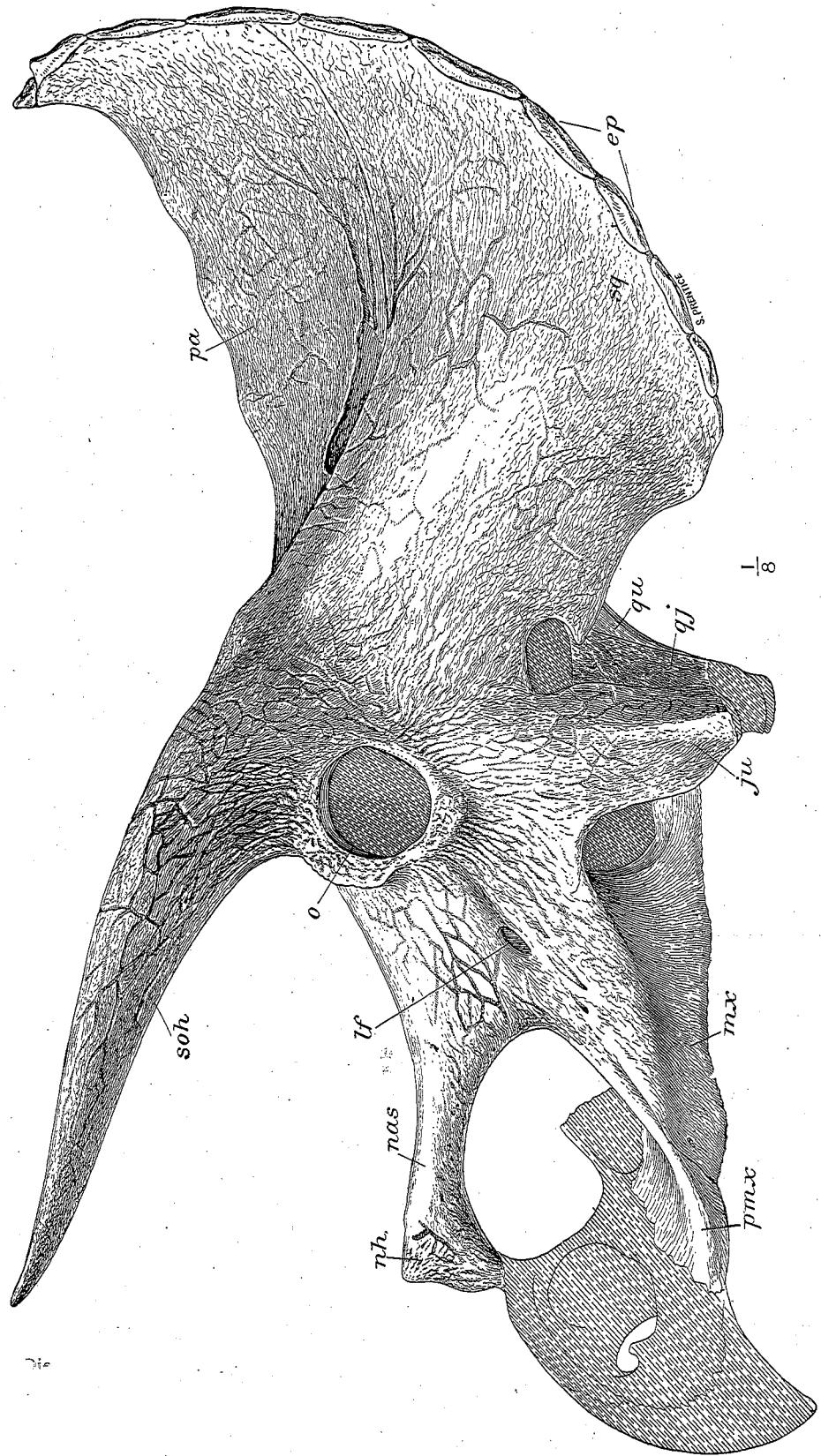
(See pp. 190-191.)

Plate prepared under the direction of Hatcher.

Specimen No. 2100, U. S. National Museum. (Skull of mounted skeleton.) Left lateral view.

<i>ep</i> , epoccipital.	<i>pa</i> , pariétal.
<i>ju</i> , jugal.	<i>pmx</i> , premaxillary.
<i>lf</i> , lachrymal foramen.	<i>qj</i> , quadratojugal.
<i>mx</i> , maxillary.	<i>qu</i> , quadrate.
<i>nas</i> , nasal.	<i>sq</i> , squamosal.
<i>nh</i> , nasal horn core.	<i>soh</i> , supraorbital horn core.
<i>o</i> , orbit.	

One-eighth natural size.



SKULL OF TRICERATOPS PRORSUS? MARSH, SIDE VIEW.

PLATE XXXI.

SKULL OF TRICERATOPS PRORSUS? MARSH.

(See pp. 190-191.)

Plate prepared under the direction of Hatcher.

Specimen No. 2100, U. S. National Museum. (Skull of mounted skeleton.) Front view.

*ep*, epoccipital.

*pa*, parietal.

*ju*, jugal.

*r*, rostral.

*lf*, lachrymal foramen.

*sq*, squamosal.

*mx*, maxillary.

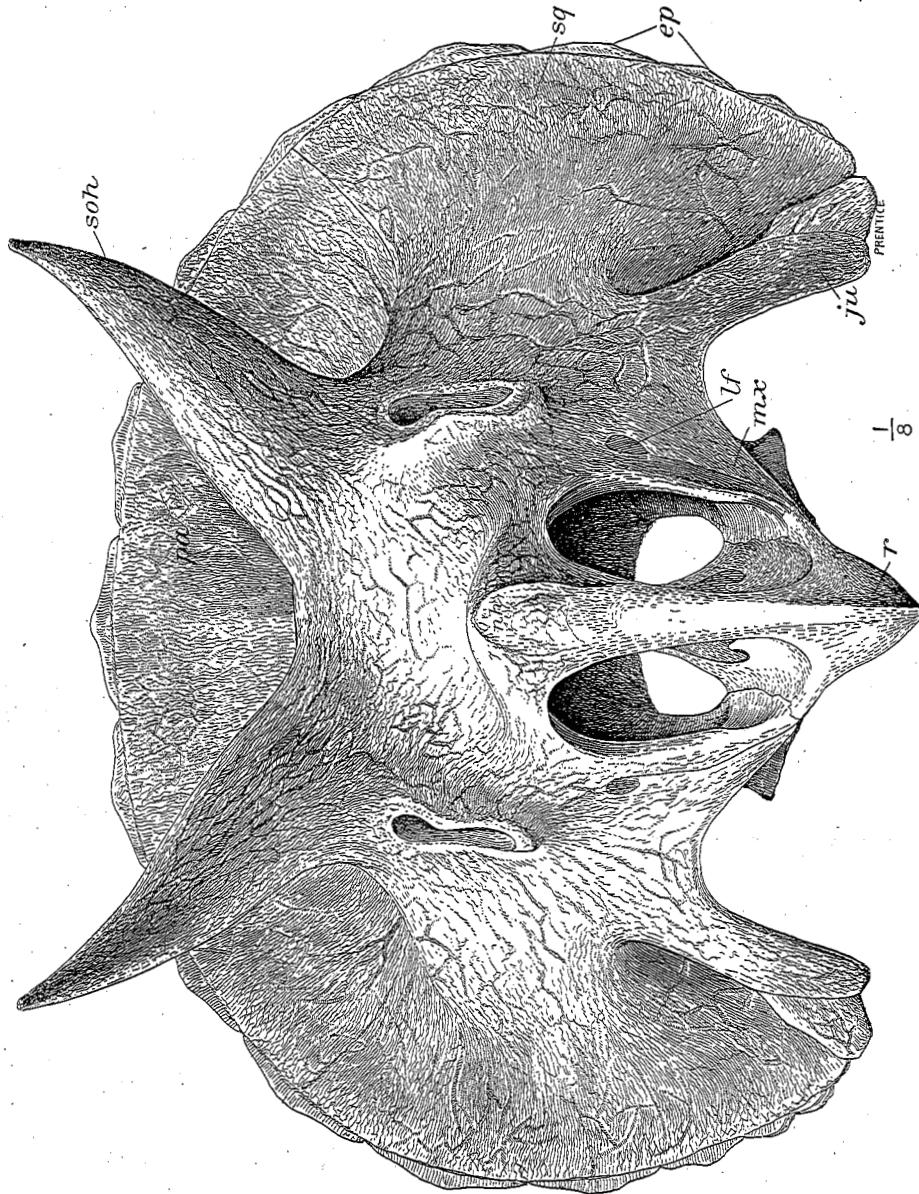
*soh*, supraorbital horn core.

*nh*, nasal horn core.

One-eighth natural size.

U. S. GEOLOGICAL SURVEY

MONOGRAPH XLIX PL. XXXI



SKULL OF TRICERATOPS PRORSUS? MARSH, FRONT VIEW.

## PLATE XXXII.

(See p. 127.)

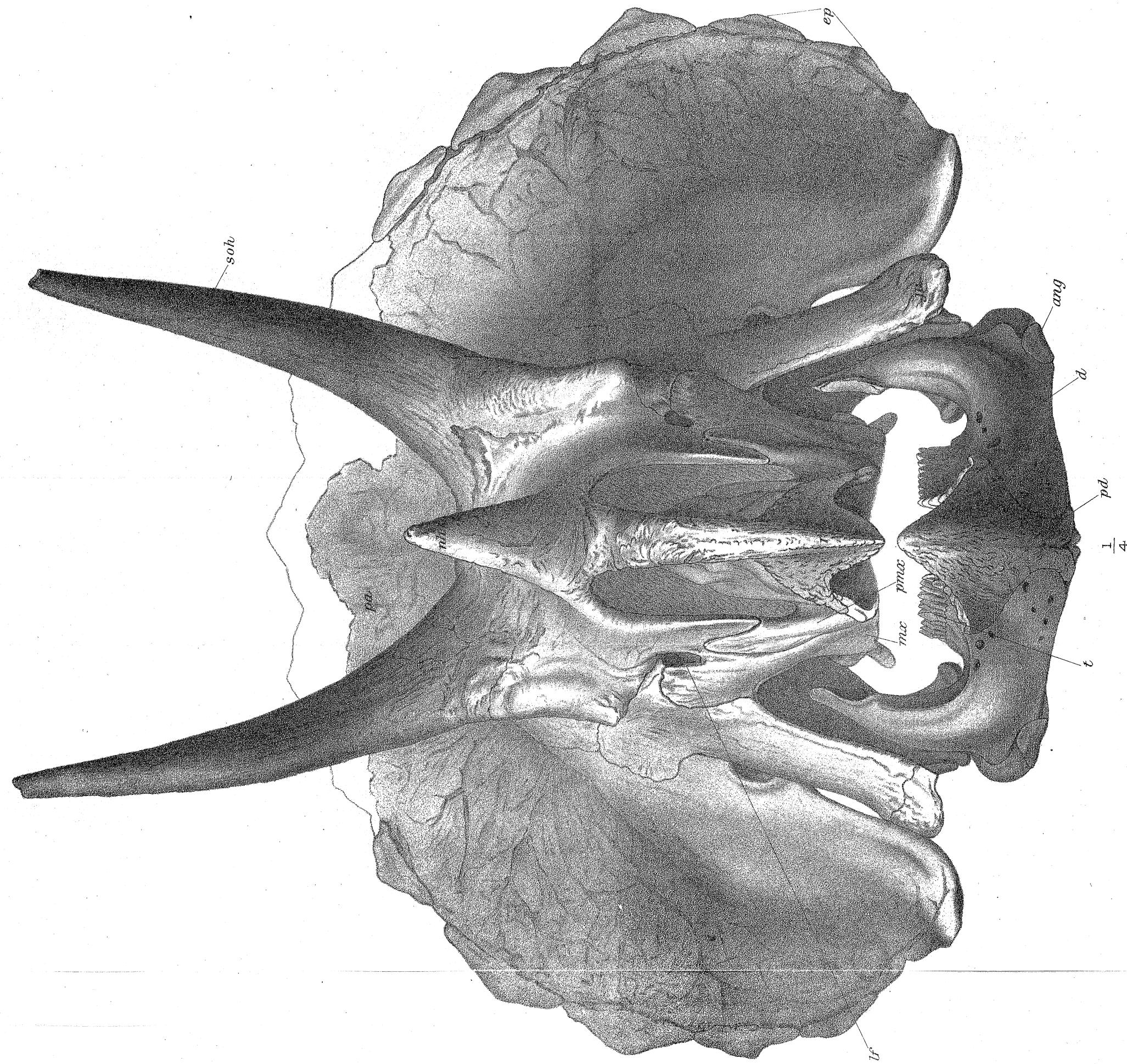
### SKULL OF TYPE OF TRICERATOPS PRORSUS MARSH.

Plate prepared under the direction of Marsh.

Type specimen, No. 1822, Yale University Museum. Front view.

<i>ang</i> , angular.	<i>pa</i> , parietal.
<i>d</i> , dentary.	<i>pd</i> , predentary.
<i>ep</i> , epoccipital.	<i>pmx</i> , premaxillary.
<i>ju</i> , jugal.	<i>r</i> , rostral.
<i>lf</i> , lachrymal foramen.	<i>sq</i> , squamosal.
<i>mx</i> , maxillary.	<i>soh</i> , supraorbital horn core.
<i>nh</i> , nasal horn core.	<i>t</i> , mandibular teeth.

One-fourth natural size.



TRICERATOPS PRORSUS, Marsh

R. del.

ANDERSON & CO.

## PLATE XXXIII.

### SKULL OF TYPE OF TRICERATOPS PRORSUS MARSH.

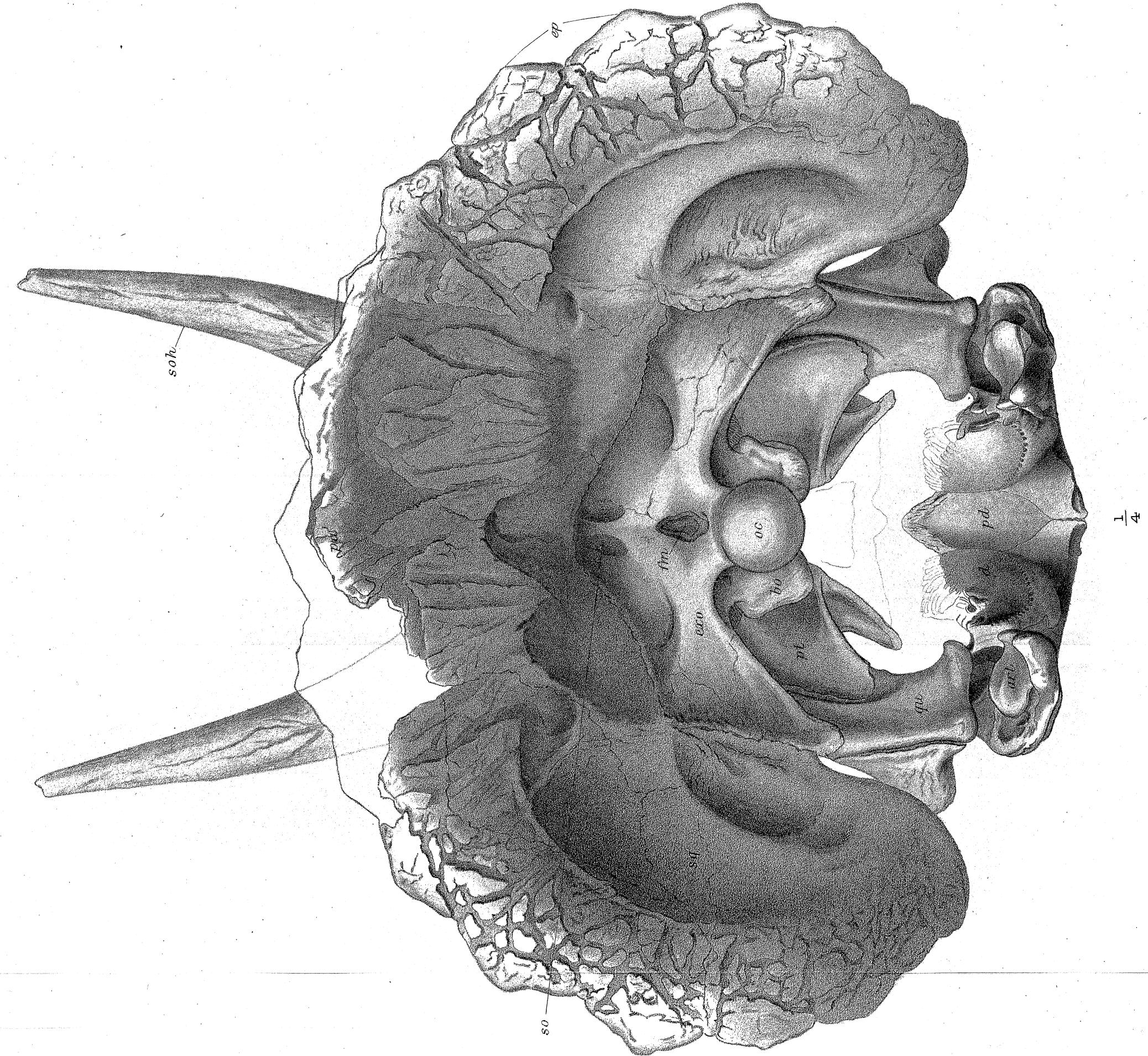
(See p. 127.)

Plate prepared under the direction of Marsh.

Type specimen, No. 1822, Yale University Museum. Posterior view.

<i>art</i> , articular.	<i>pa</i> , parietal.
<i>bo</i> , basicoccipital.	<i>pd</i> , pre dentary.
<i>d</i> , dentary.	<i>qu</i> , quadrate.
<i>ep</i> , epoccipital.	<i>so</i> , supraoccipital.
<i>exo</i> , exoccipital.	<i>sq</i> , squamosal.
<i>fm</i> , foramen magnum.	<i>soh</i> , supraorbital horn core.
<i>oc</i> , occipital condyle.	

One-fourth natural size.



## P L A T E   X X X I V.

### SKULL OF TYPE OF TRICERATOPS PRORSUS MARSH.

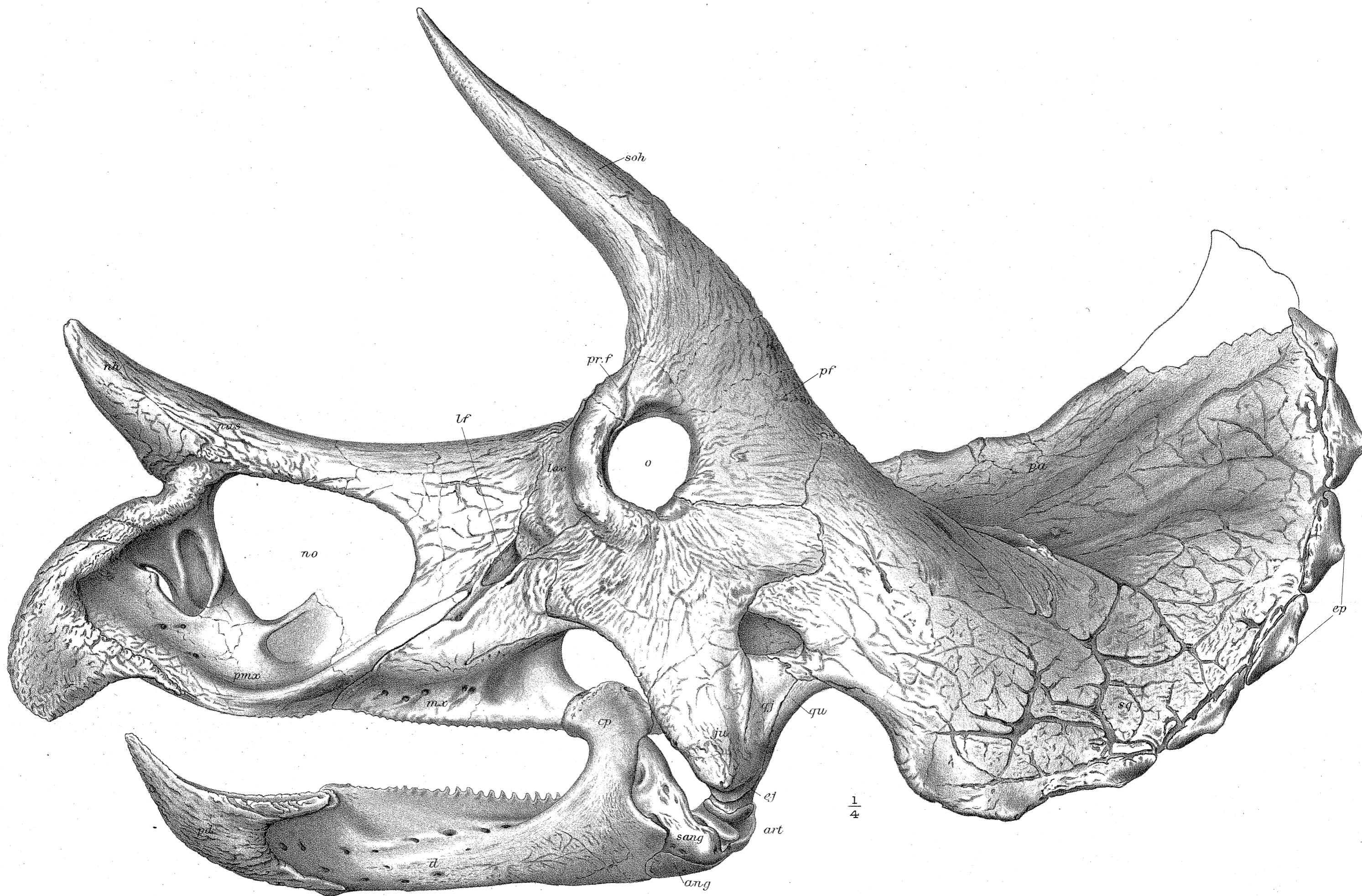
(See p. 127.)

Plate prepared under the direction of Marsh.

Type specimen, No. 1822, Yale University Museum. Left lateral view.

<i>ang</i> ,	angular.	<i>o</i> ,	orbit.
<i>art</i> ,	articular.	<i>pa</i> ,	parietal.
<i>cp</i> ,	coronoid process.	<i>pf</i> ,	postfrontal.
<i>d</i> ,	dentary.	<i>prf</i> ,	prefrontal.
<i>ej</i> ,	epijugal.	<i>pmx</i> ,	premaxillary.
<i>ep</i> ,	epoccipital.	<i>qj</i> ,	quadratojugal.
<i>ju</i> ,	jugal.	<i>qu</i> ,	quadrate.
<i>lf</i> ,	lachrymal foramen.	<i>r</i> ,	rostral.
<i>mx</i> ,	maxillary.	<i>sang</i> ,	surangular.
<i>nas</i> ,	nasal.	<i>sq</i> ,	squamosal.
<i>nh</i> ,	nasal horn core.	<i>soh</i> ,	supraorbital horn core.
<i>no</i> ,	nasal opening.		

One-fourth natural size.



TRICERATOPS PRORSUS, Marsh

PLATE XXXV.

SKULL OF TYPE OF TRICERATOPS PRORSUS MARSH.

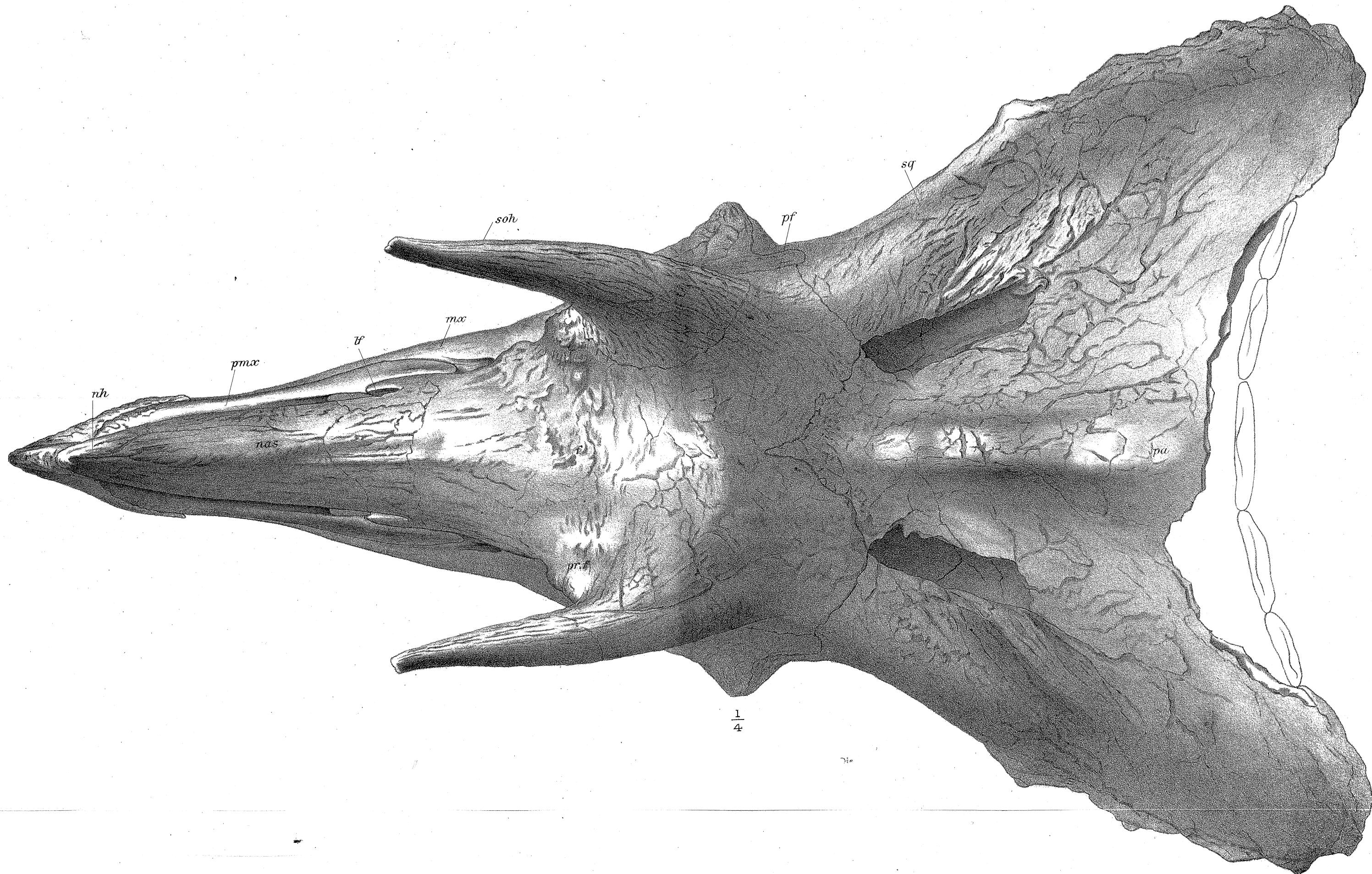
(See p. 127.)

Plate prepared under the direction of Marsh.

Type specimen, No. 1822, Yale University Museum. Superior view.

<i>f</i> , frontal.	<i>pf</i> , postfrontal.
<i>lf</i> , lachrymal foramen.	<i>prf</i> , prefrontal.
<i>mx</i> , maxillary.	<i>pmx</i> , premaxillary.
<i>nas</i> , nasal.	<i>r</i> , rostral.
<i>nh</i> , nasal horn.	<i>sq</i> , squamosal.
<i>pa</i> , parietal.	<i>soh</i> , supraorbital horn core.

One-fourth natural size.



## PLATE XXXVI.

### SKULL OF TYPE OF TRICERATOPS PRORSUS MARSH.

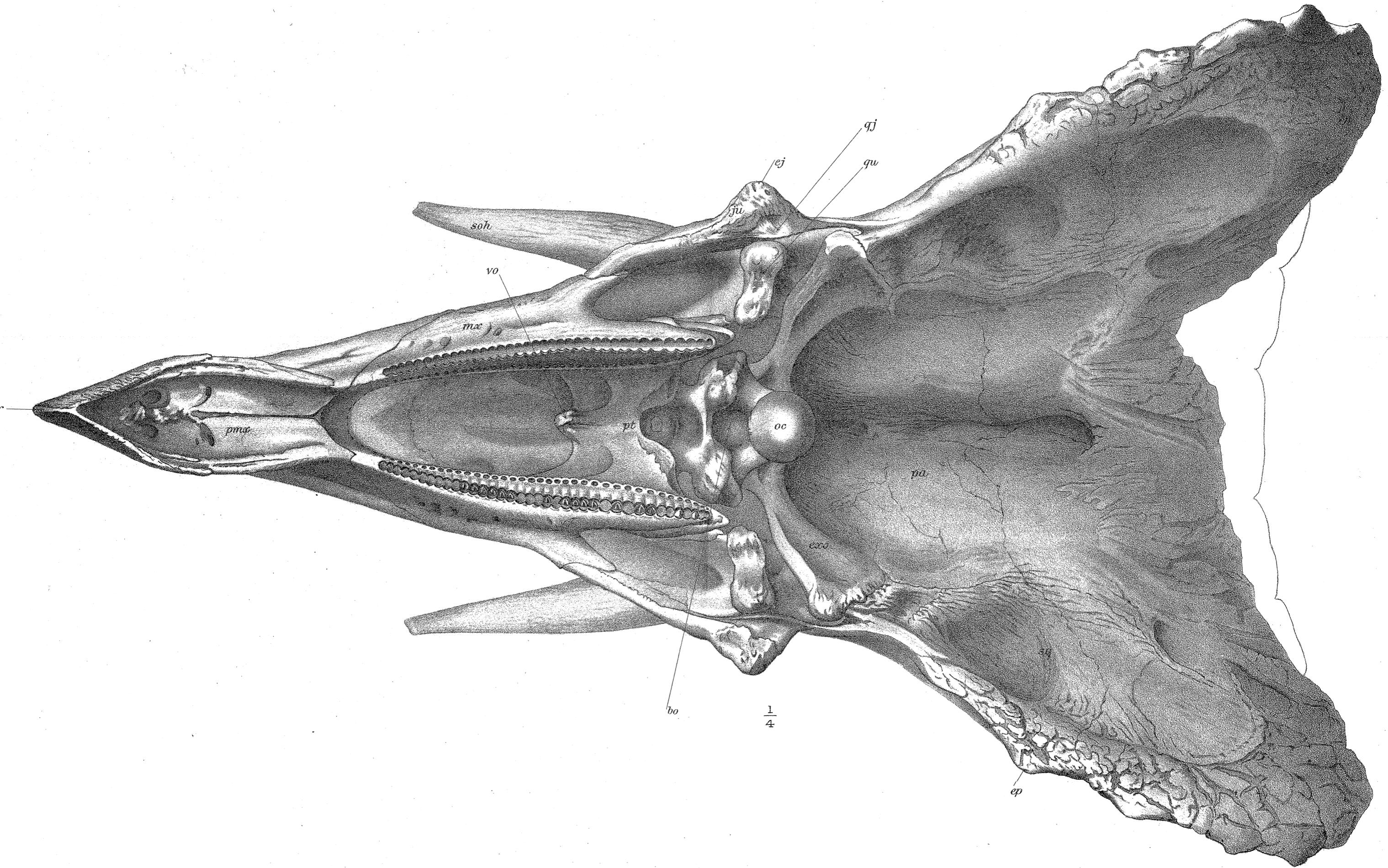
(See p. 127.)

Plate prepared under the direction of Marsh.

Type specimen, No. 1822, Yale University Museum. Inferior view.

<i>bo</i> ,	basioccipital.	<i>pmx</i> ,	premaxillary.
<i>ej</i> ,	epijugal.	<i>pt</i> ,	pterygoids.
<i>ep</i> ,	epoccipital.	<i>qj</i> ,	quadratojugal.
<i>exo</i> ,	exoccipital.	<i>qu</i> ,	quadrate.
<i>ju</i> ,	jugal.	<i>r</i> ,	rostral.
<i>mx</i> ,	maxillary.	<i>soh</i> ,	supraorbital horn core.
<i>oc</i> ,	occipital condyle.	<i>sq</i> ,	squamosal.
<i>pa</i> ,	parietal.	<i>vo</i> ,	vomer.

One-fourth natural size.



## PLATE XXXVII.

SKULL REFERRED BY MARSH TO TRICERATOPS SULCATUS MARSH.

(See p. 134.)

Plate prepared under the direction of Marsh.

Specimens Nos. 1203, 1206-1210, U. S. National Museum.

FIG. 1. Posterior view with crest broken away, showing occiput.

FIG. 2. Anterior view.

*bo*, basioccipital.

*exo*, exoccipital.

*fm*, foramen magnum.

*o*, orbit.

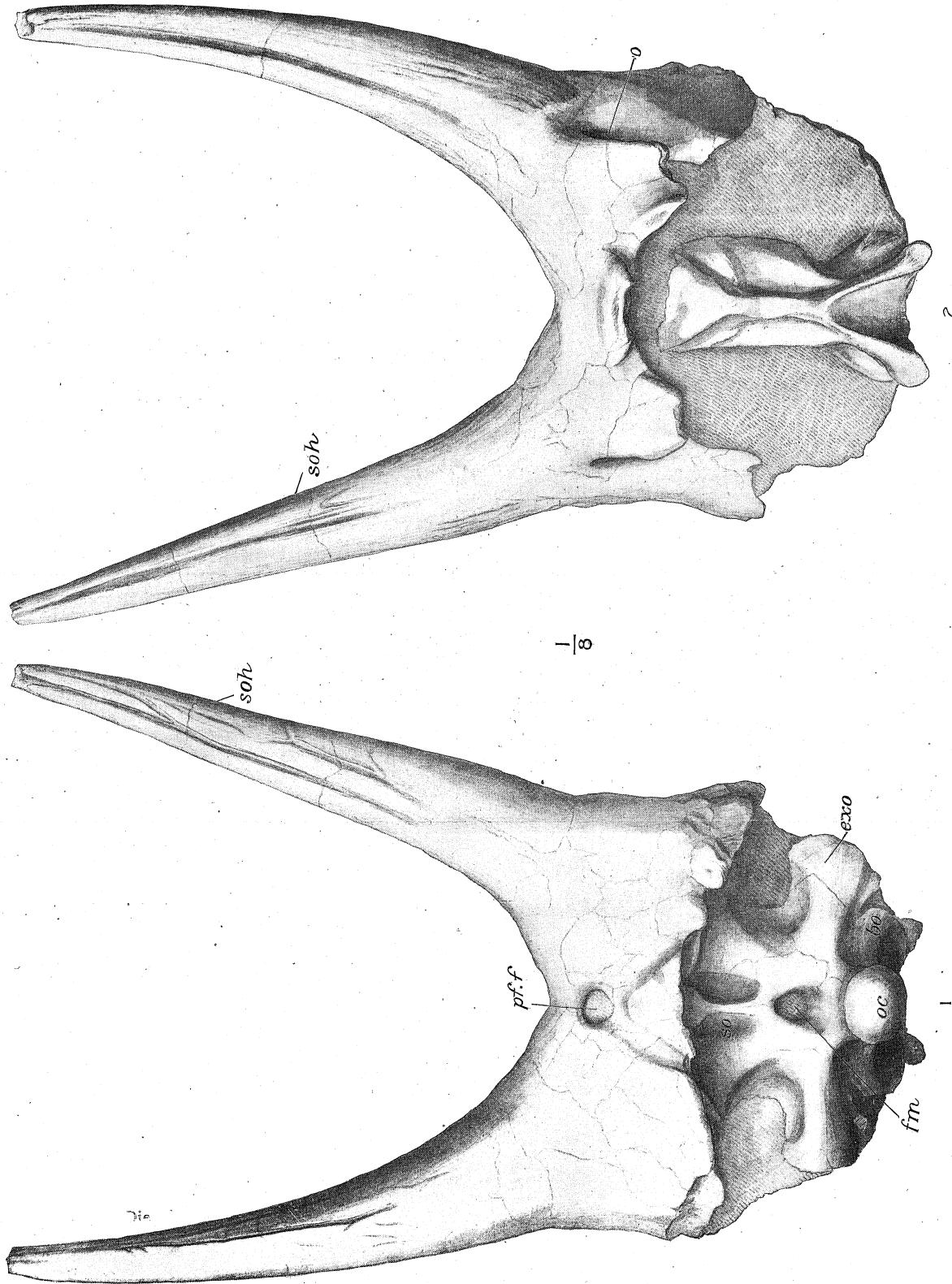
*oc*, occipital condyle.

*pff*, postfrontal fontanelle.

*so*, supraoccipital.

*soh*, supraorbital horn core.

One-eighth natural size.



SKULL REFERRED TO *TRICERATOPS SULCATUS* MARSH.

2

1

## PLATE XXXVIII.

(See p. 138.)

### SKULL OF TYPE OF TRICERATOPS CALICORNIS MARSH.

Plate prepared under the direction of Hatcher.

Type specimen, No. 4928, U. S. National Museum. Left lateral view.

<i>ep</i> , epoccipital.	<i>pd</i> , predentary.
<i>ju</i> , jugal.	<i>pf</i> , postfrontal.
<i>lf</i> , lachrymal foramen.	<i>prf</i> , prefrontal.
<i>mx</i> , maxillary.	<i>qj</i> , quadratojugal.
<i>nas</i> , nasal.	<i>qu</i> , quadrate.
<i>nh</i> , nasal horn core.	<i>r</i> , rostral.
<i>no</i> , nasal opening.	<i>sq</i> , squamosal.
<i>o</i> , orbit.	<i>soh</i> , supraorbital horn core.
<i>pa</i> , parietal.	

One-eighth natural size.



SKULL OF *TRICERATOPS CALICORNIS MARSH*, SIDE VIEW.

## PLATE XXXIX.

### SKULL OF TYPE OF TRICERATOPS CALICORNIS MARSH.

(See p. 138.)

Plate prepared under the direction of Hatcher.

Type specimen, No. 4928, U. S. National Museum. Superior view.

*ep*, epoccipital.

*pff*, postfrontal fontanelle.

*fr*, frontal.

*prf*, prefrontal.

*mx*, maxillary.

*pmx*, premaxillary.

*nas*, nasal.

*r*, rostral.

*nh*, nasal horn core.

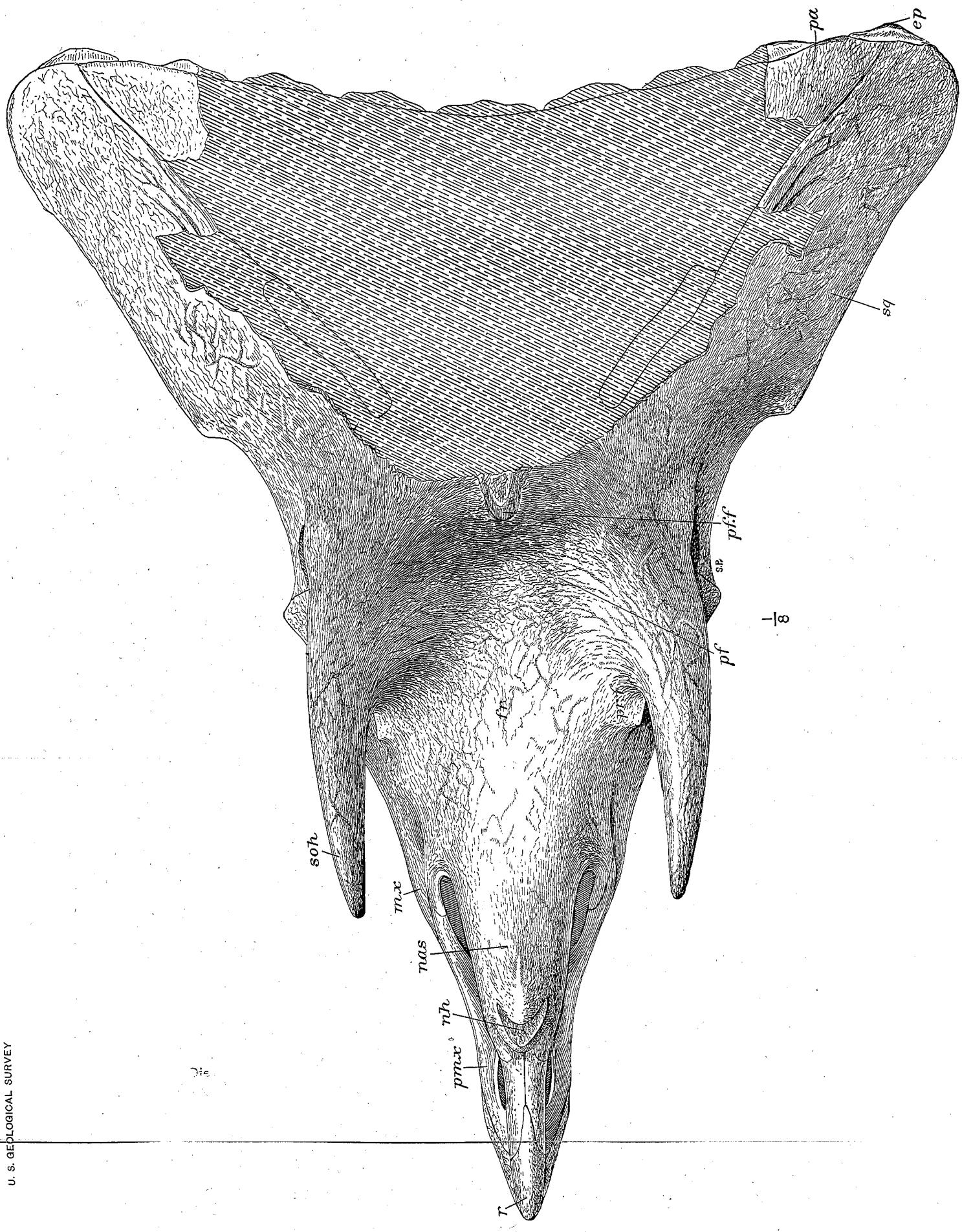
*sq*, squamosal.

*pa*, parietal.

*soh*, supraorbital horn core.

*pf*, postfrontal.

One-eighth natural size.



SKULL OF *TRICERATOPS CALICORNIS MARSH*, TOP VIEW.

## PLATE XL.

### VERTEBRÆ OF TRICERATOPS.

(See pp. 46, 139, 142.)

Plate prepared under the direction of Hatcher.

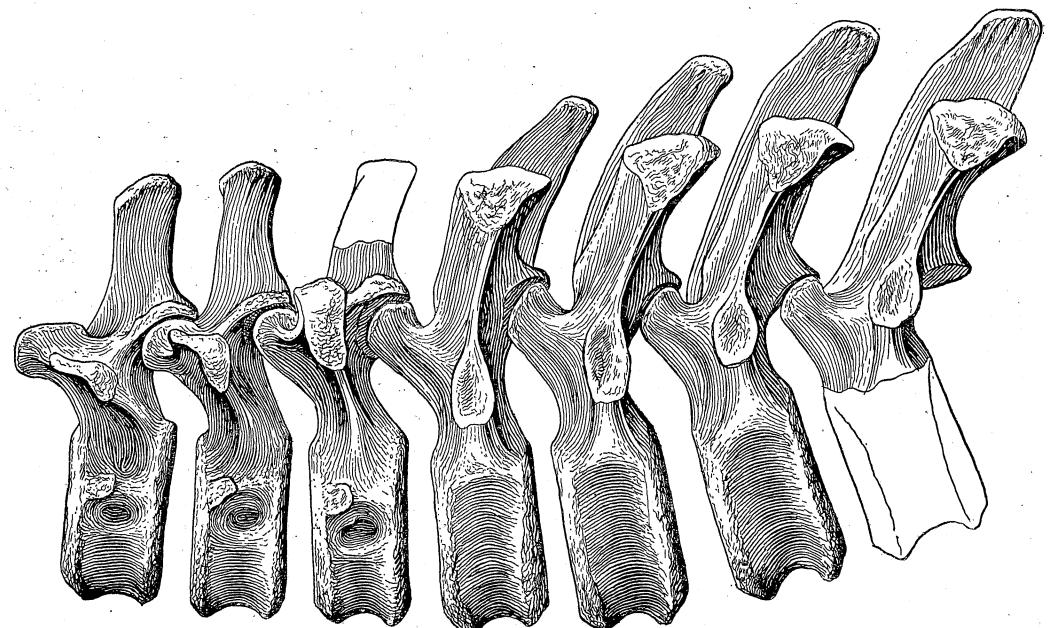
FIG. 1. Presacral vertebræ of *Triceratops brevicornis* Hatcher. Type specimen, No. 1834, Yale University Museum.

FIGS. 2, 3. Vertebræ of *Triceratops calicornis* Marsh. Type specimen, No. 4928, U. S. National Museum.

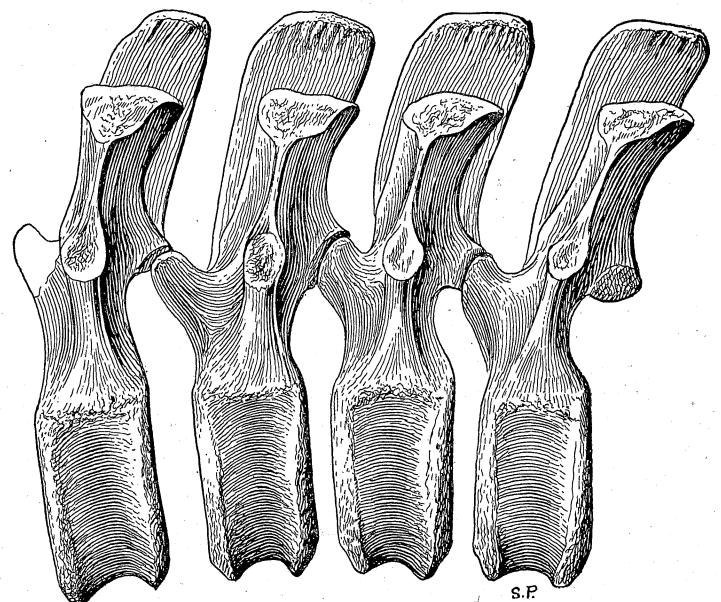
FIG. 2. Cervical 8 and dorsals 1-6.

FIG. 3. Posterior dorsal vertebræ.

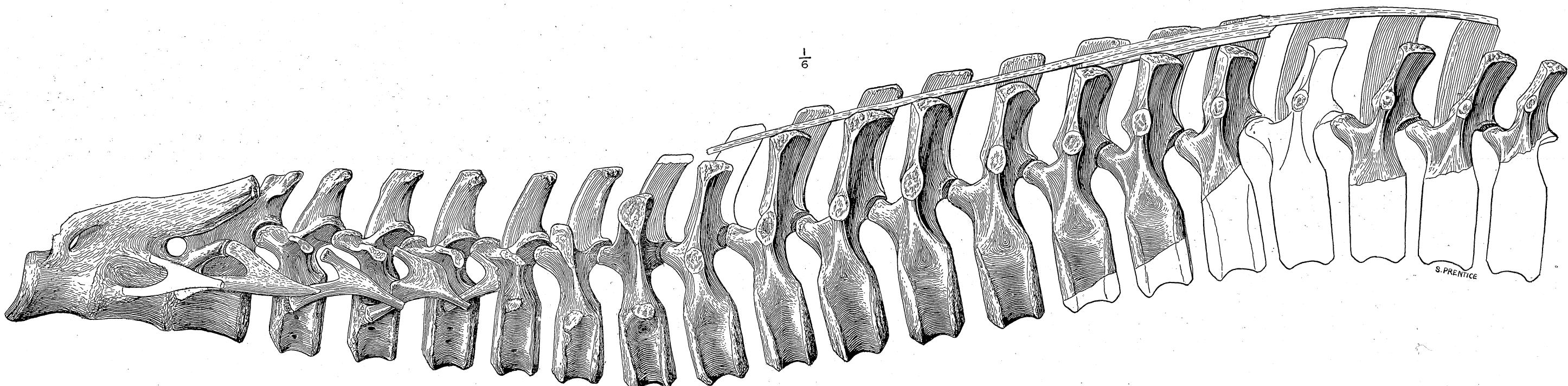
One-sixth natural size.



2



3



VERTEBRAE OF TRICERATOPS BREVICORNUS HATCHER AND T. CALICORNIS MARSH.

## PLATE XLI.

### SKULL OF TYPE OF TRICERATOPS BREVICORNUS HATCHER.

(See p. 141.)

Plate prepared under the direction of Hatcher.

Type specimen, No. 1834, Yale University Museum. Left lateral view.

<i>ang</i> ,	angular.	<i>no</i> ,	nasal opening.
<i>art</i> ,	articular.	<i>o</i> ,	orbit.
<i>cp</i> ,	coronoid process.	<i>pa</i> ,	parietal.
<i>d</i> ,	dentary.	<i>pd</i> ,	predentary.
<i>ep</i> ,	epoccipital.	<i>pmx</i> ,	premaxillary.
<i>ju</i> ,	jugal.	<i>qu</i> ,	quadrate.
<i>lf</i> ,	lachrymal foramen.	<i>r</i> ,	rostral.
<i>mx</i> ,	maxillary.	<i>sang</i> ,	surangular.
<i>nas</i> ,	nasal.	<i>sq</i> ,	squamosal.
<i>nh</i> ,	nasal horn core.	<i>soh</i> ,	supraorbital horn core.

One-eighth natural size.

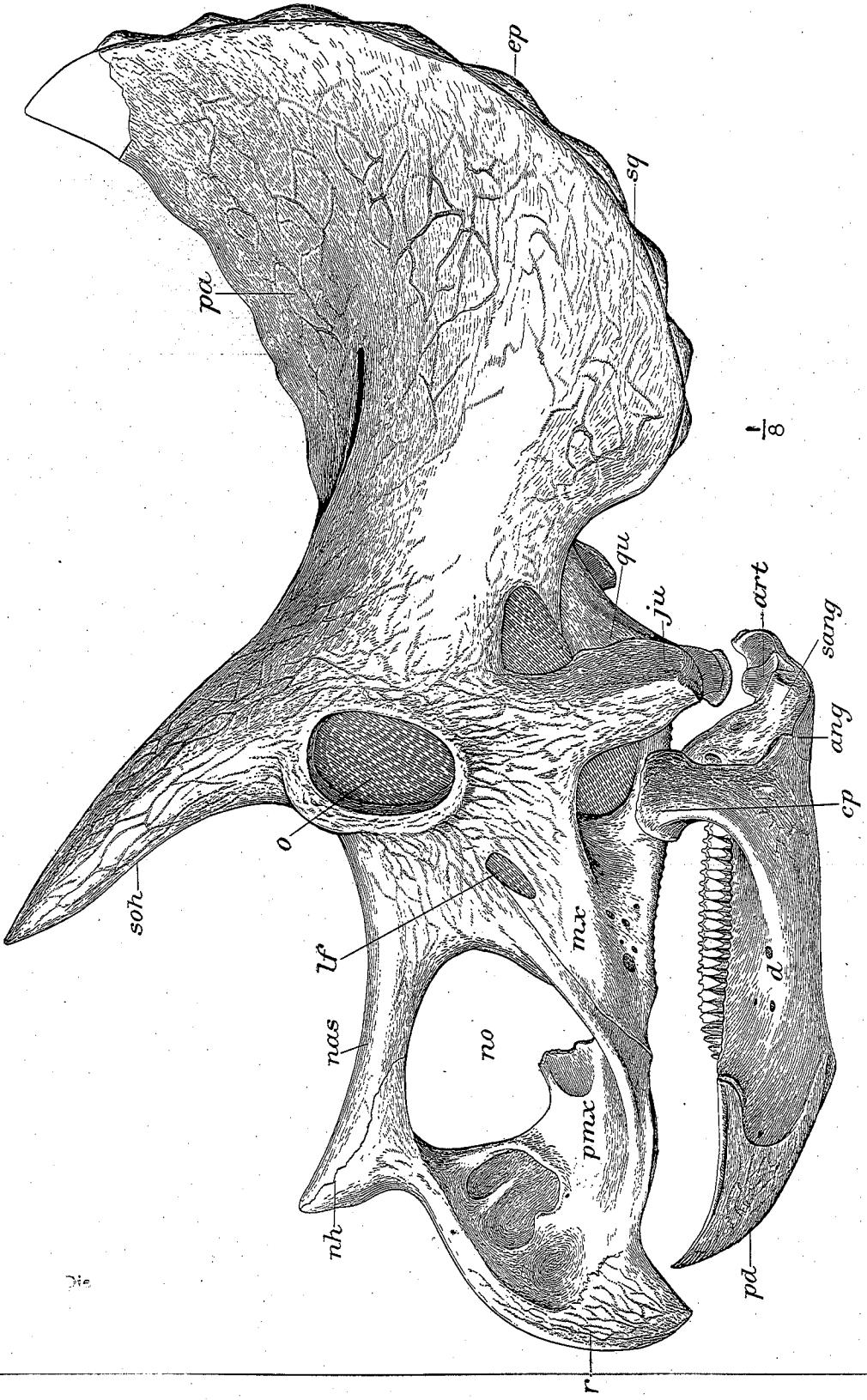


PLATE XLII.

SKULL OF TYPE OF TRICERATOPS BREVICORNUS HATCHER.

(See p. 141.)

Plate prepared under the direction of Hatcher.

Type specimen, No. 1834, Yale University Museum. Palatal view.

*bo*, basioccipital.

*pa*, parietal.

*dc*, dental channel.

*pal*, palatine.

*ep*, epoccipital.

*pma*, premaxillary.

*exo*, exoccipital.

*pt*, pterygoid.

*ju*, jugal.

*qu*, quadrate.

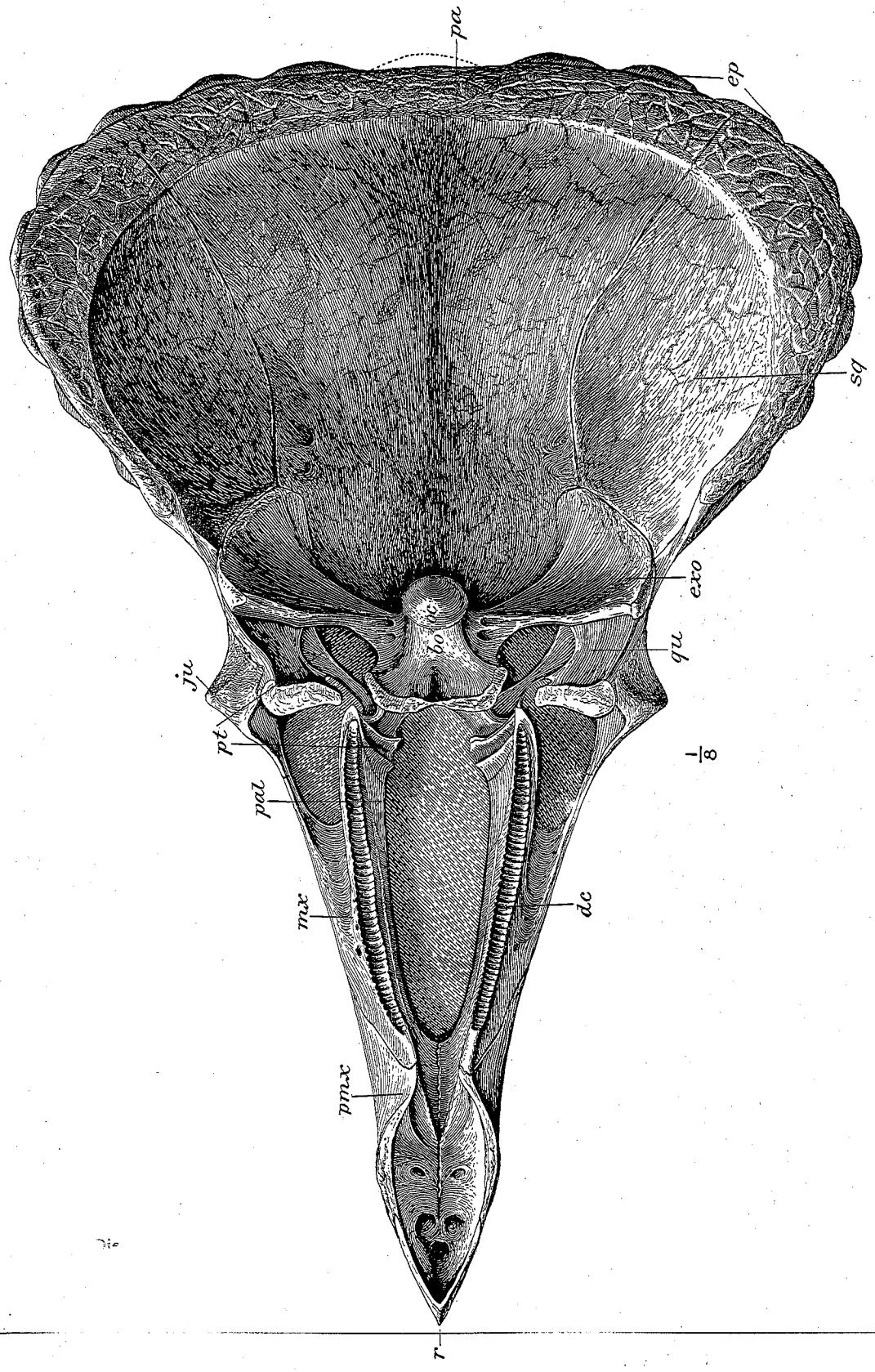
*mx*, maxillary.

*r*, rostral.

*oc*, occipital condyle.

*sg*, squamosal.

One-eighth natural size.



SKULL OF TRICERATOPS BREVICORNIS HATCHER, PALATAL VIEW.

## PLATE XLIII.

### SKULL OF TYPE OF TRICERATOPS ELATUS MARSH.

(See p. 135.)

Plate prepared under the direction of Hatcher.

Type specimen, No. 1201, U. S. National Museum. Left lateral view.

*ju*, jugal.

*pf*, postfrontal.

*lac*, lachrymal.

*pm*, premaxillary.

*lf*, lachrymal foramen.

*pif*, prefrontal.

*mx*, maxillary.

*qj*, quadratojugal.

*nas*, nasal.

*qu*, quadrate.

*nh*, nasal horn core.

*r*, rostral.

*no*, nasal opening.

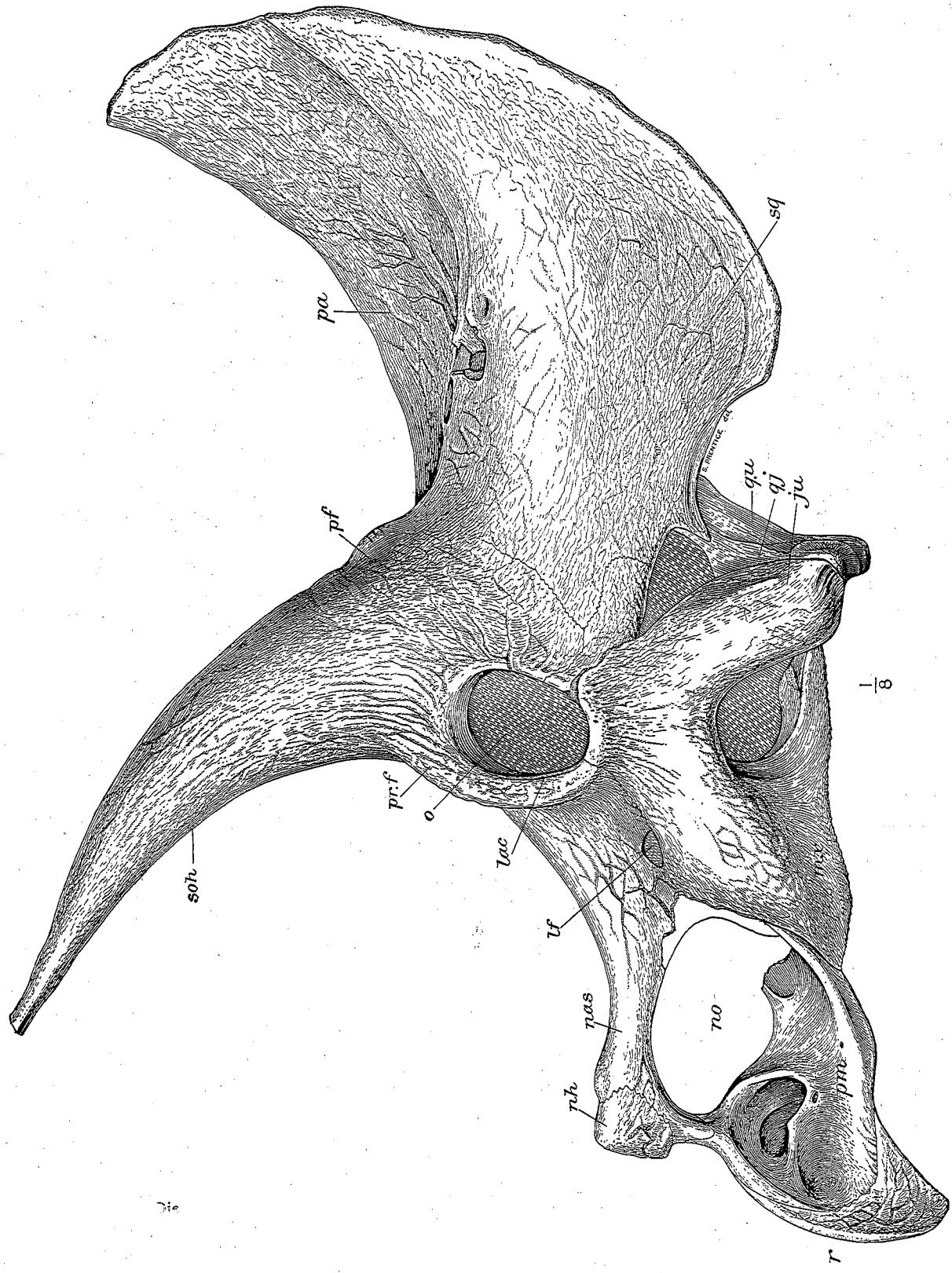
*sq*, squamosal.

*o*, orbit.

*soh*, supraorbital horn core.

*pa*, parietal.

One-eighth natural size.



SKULL OF TRICERATOPS ELATUS MARSH, SIDE VIEW.

## PLATE XLIV.

### SKULL OF TYPE OF TRICERATOPS FLABELLATUS MARSH.

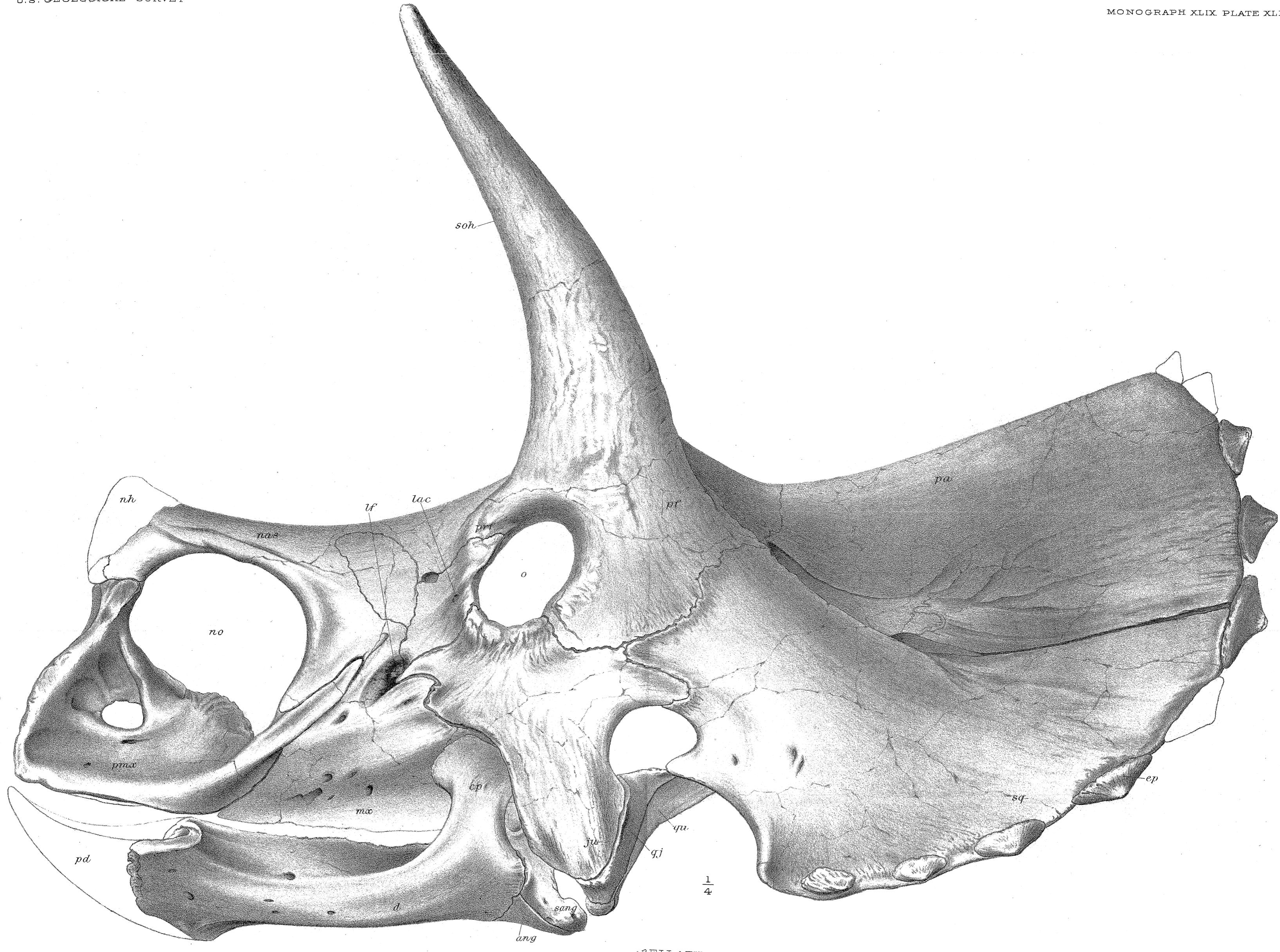
(See p. 143.)

Plate prepared under the direction of Marsh.

Type specimen, No. 1821, Yale University Museum. Left lateral view.

<i>ang</i> , angular.	<i>o</i> , orbit.
<i>cp</i> , coronoid process.	<i>pa</i> , parietal.
<i>d</i> , dentary.	<i>pd</i> , predentary.
<i>ep</i> , epoccipital.	<i>pf</i> , postfrontal.
<i>ju</i> , jugal.	<i>pmx</i> , premaxillary.
<i>lac</i> , lachrymal.	<i>prf</i> , prefrontal.
<i>lf</i> , lachrymal foramen.	<i>qj</i> , quadratojugal.
<i>mx</i> , maxillary.	<i>qu</i> , quadrate.
<i>nas</i> , nasal.	<i>sang</i> , surangular.
<i>nh</i> , nasal horn core.	<i>sq</i> , squamosal.
<i>no</i> , nasal opening.	<i>soh</i> , supraorbital horn core.

One-fourth natural size.



## PLATE XLV.

### SKULL OF TYPE OF TRICERATOPS FLABELLATUS MARSH.

(See p. 143.)

Plate prepared under the direction of Marsh.

Type specimen, No. 1821, Yale University Museum. Superior view.

*ep*, epoccipital.

*pf*, postfrontal.

*f*, frontal.

*pmx*, premaxillary.

*ju*, jugal.

*prf*, prefrontal.

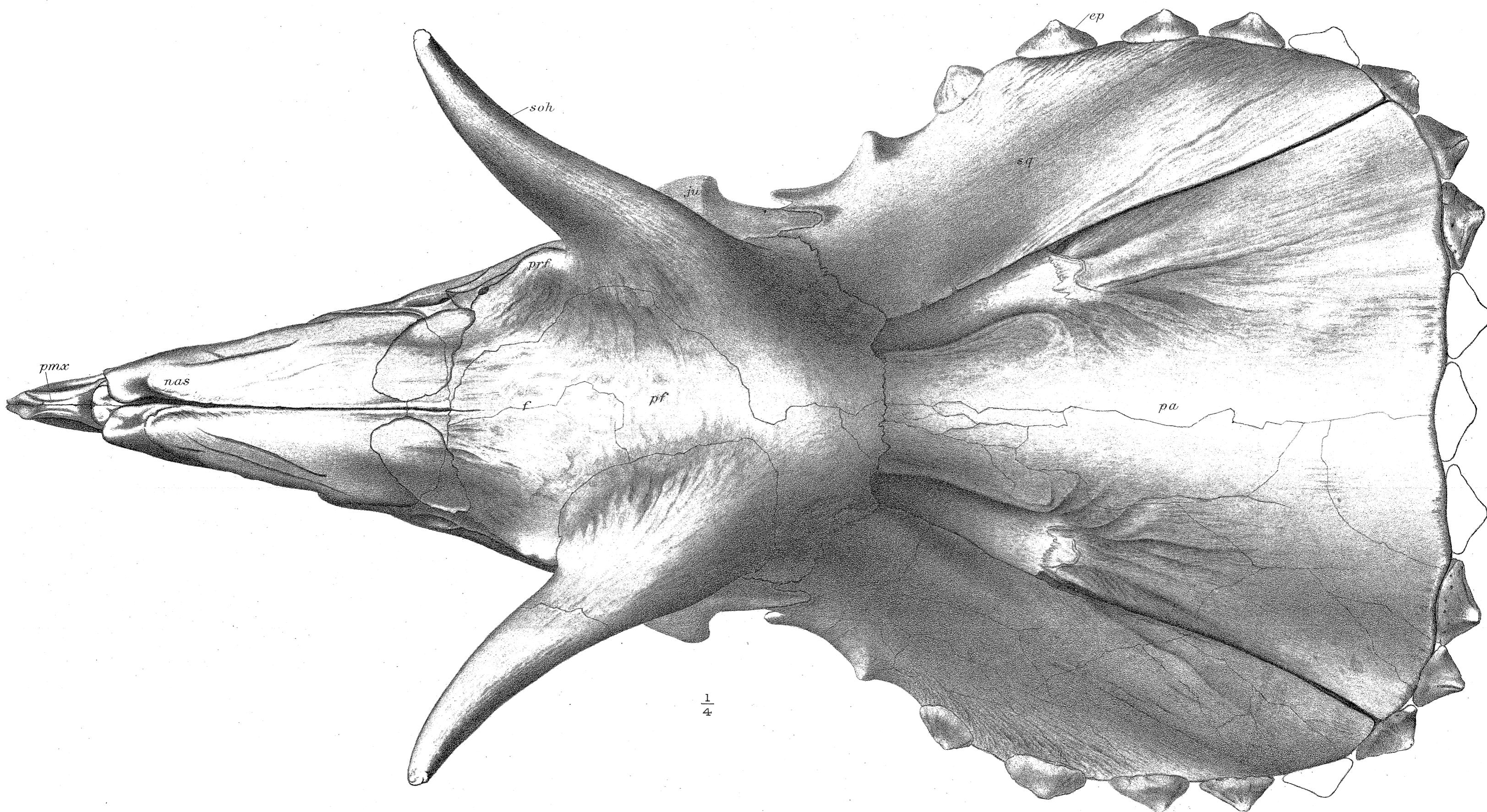
*nas*, nasal.

*sq*, squamosal.

*pa*, parietal.

*soh*, supraorbital horn cores.

One-fourth natural size.



## PLATE XLVI.

### SKULL OF TYPE OF TRICERATOPS FLABELLATUS MARSH.

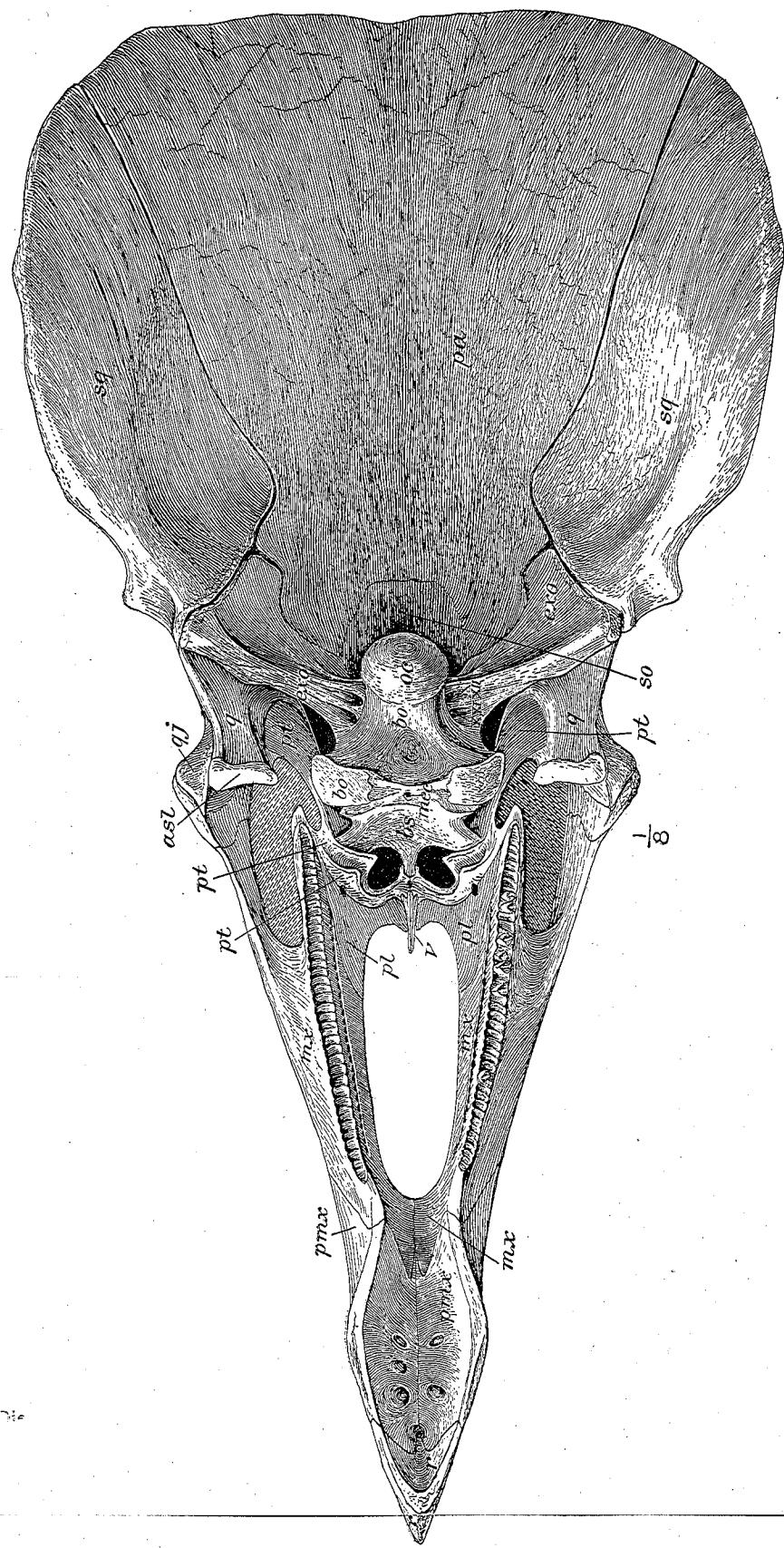
(See p. 143.)

Plate prepared under the direction of Hatcher.

Type specimen, No. 1821, Yale University Museum. Palatal view.

<i>asl</i> ,	articulating surface for lower jaw.	<i>pma</i> ,	premaxillary.
<i>bo</i> ,	basioccipital.	<i>pt</i> ,	pterygoid.
<i>bs</i> ,	basisphenoid.	<i>q</i> ,	quadrate.
<i>exo</i> ,	exoccipital.	<i>qj</i> ,	quadratojugal.
<i>mec</i> ,	median eustachian canal.	<i>r</i> ,	rostral bone.
<i>mx</i> ,	maxillary.	<i>so</i> ,	supraoccipital.
<i>oc</i> ,	occipital condyle.	<i>sq</i> ,	squamosal.
<i>pa</i> ,	parietal.	<i>v</i> ,	vomer.
<i>pl</i> ,	palatine.	<i>x, xi, xii</i> , cranial nerve foramina.	

One-eighth natural size.



SKULL OF TRICERATOPS FLABELLATUS MARSH, PALATAL VIEW.

PLATE XLVII.  
SKULL OF TYPE OF DICERATOPS HATCHERI LULL.

(See p. 149.)

Plate prepared under the direction of Hatcher.

Type specimen, No. 2412, U. S. National Museum. Left lateral view.

*ep*, epoccipital.

*pa*, parietal.

*ju*, jugal.

*pmx*, premaxillary.

*lf*, lachrymal foramen.

*qu*, quadrate.

*mt*, maxillary teeth.

*r*, rostral.

*mx*, maxillary.

*sf*, squamosal fenestra?

*n*, nasal.

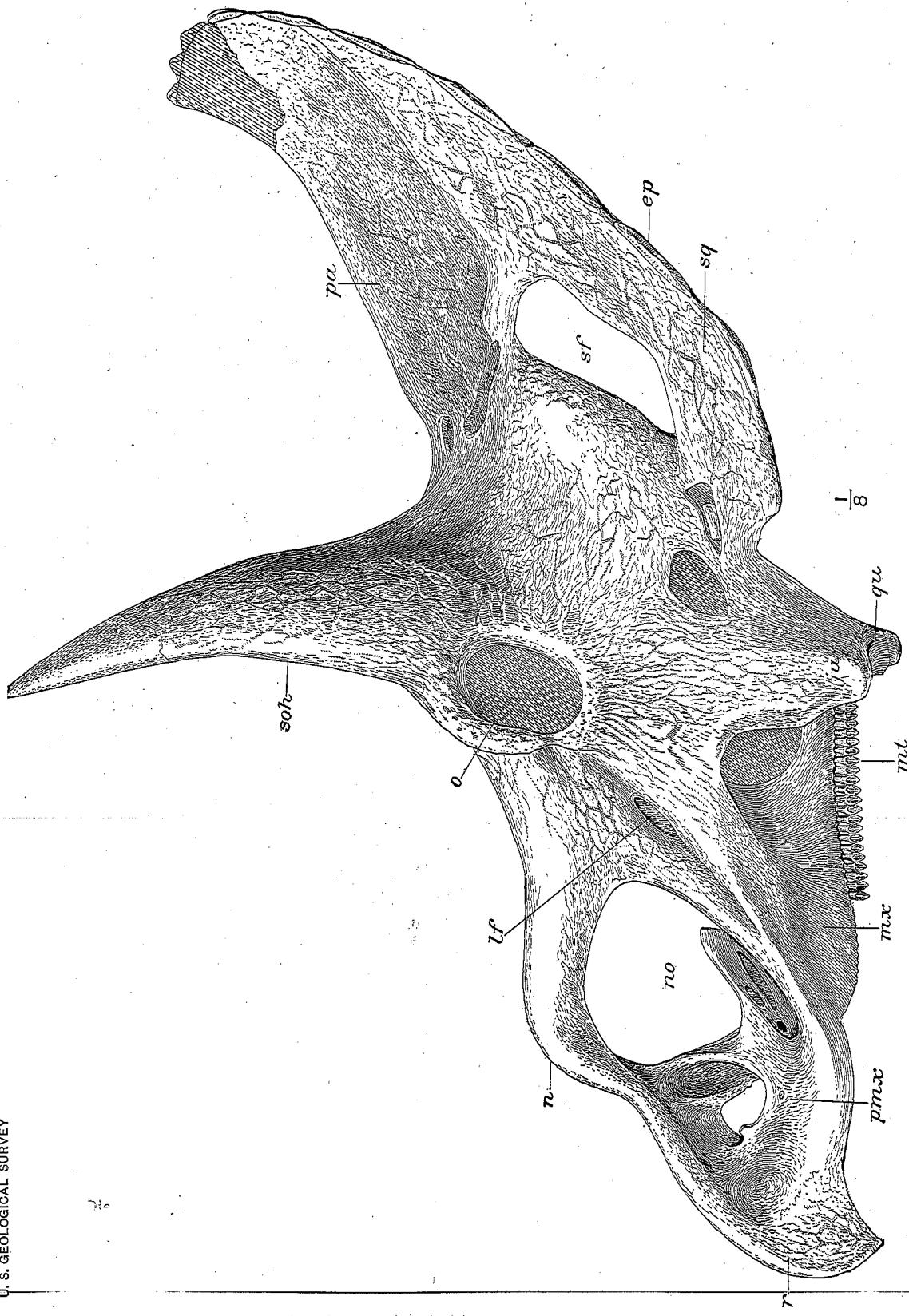
*sq*, squamosal.

*no*, nasal opening.

*soh*, supraorbital horn core.

*o*, orbit.

One-eighth natural size.



SKULL OF DICERATOPS HATCHERI LULL, SIDE VIEW.

PLATE XLVIII.  
SKULL OF TYPE OF DICERATOPS HATCHERI LULL.

(See p. 149.)

Plate prepared under the direction of Hatcher.

Type specimen, No. 2412, U. S. National Museum. Superior view.

*ep*, epoccipital.

*paf*, parietal fenestra?

*f*, frontal.

*pf*, postfrontal.

*lf*, lachrymal foramen.

*gff*, postfrontal fontanelle.

*na*, nasal.

*r*, rostral.

*no*, nasal opening.

*sf*, squamosal fenestra?

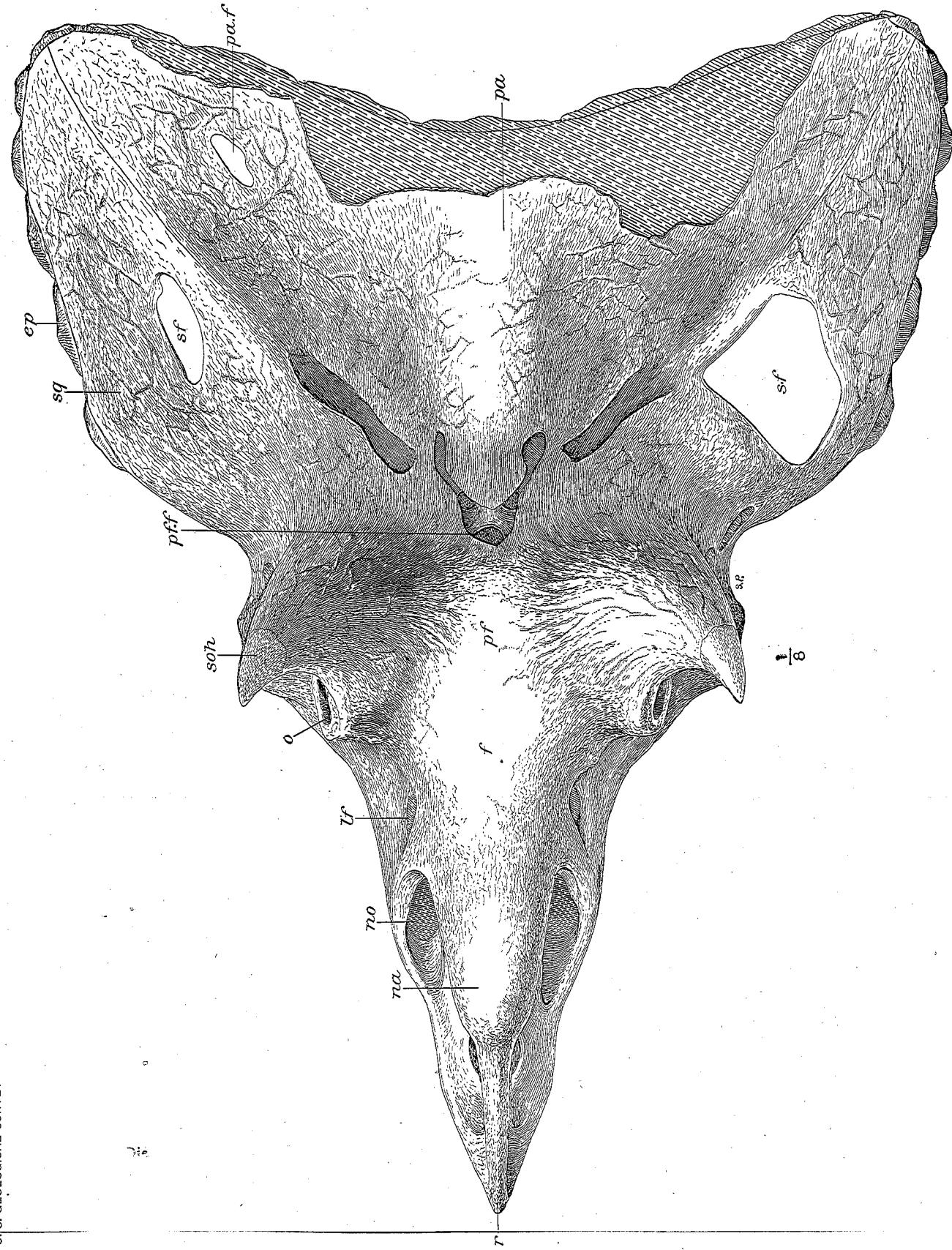
*o*, orbit.

*sq*, squamosal.

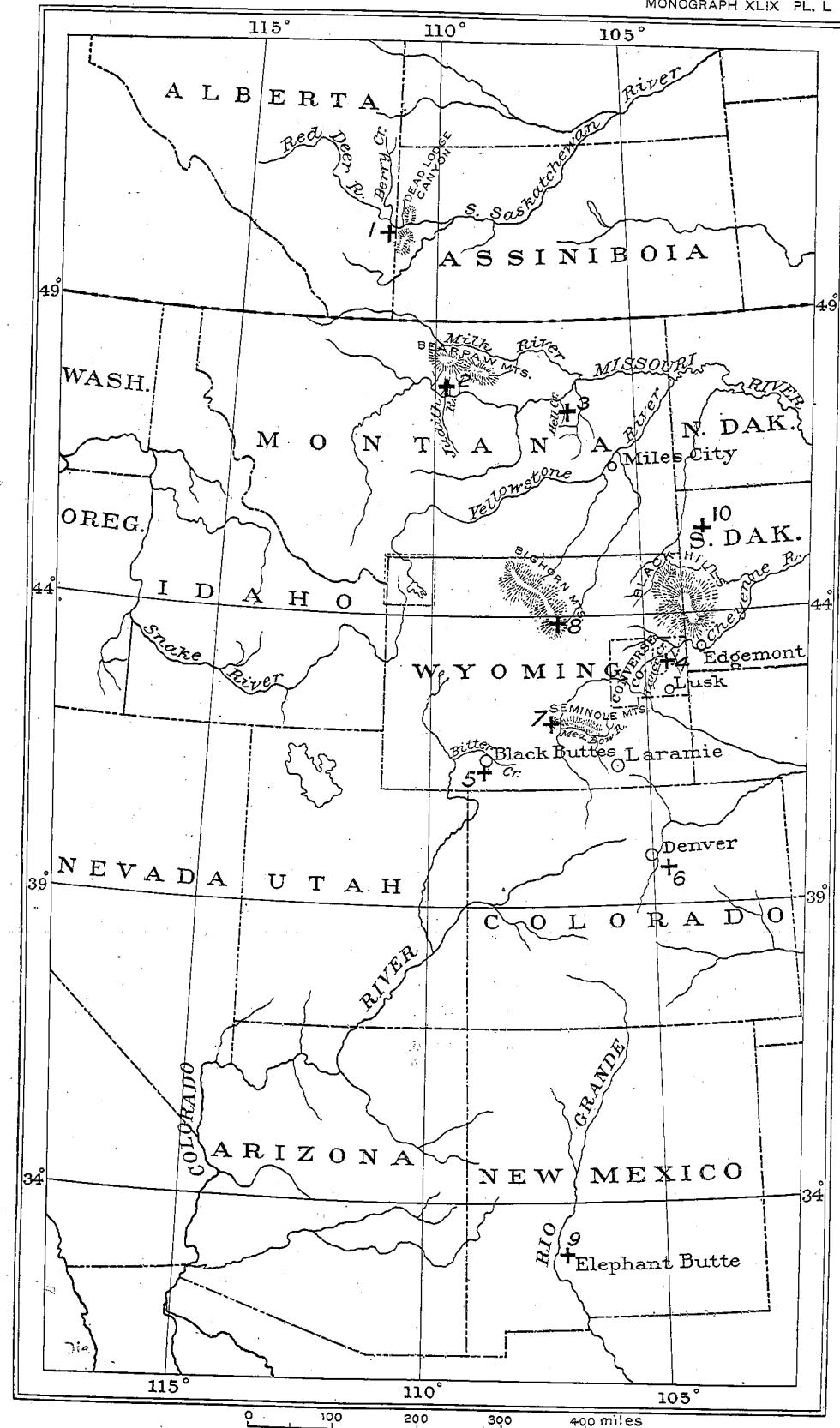
*pa*, parietal.

*soh*, supraorbital horn core.

One-eighth natural size.

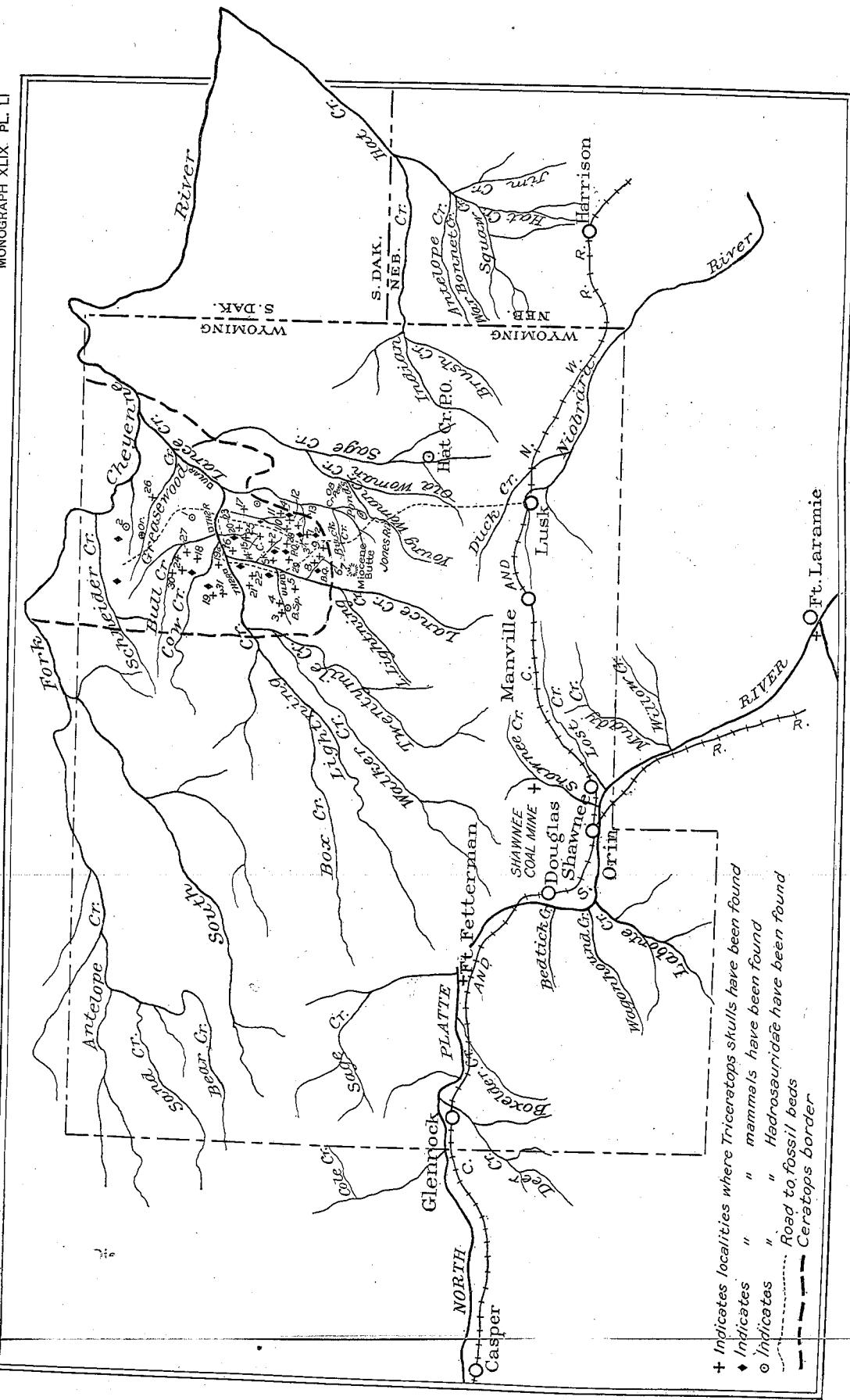


SKULL OF DICERATOPS HATCHERI LULL, TOP VIEW.



MAP SHOWING PRINCIPAL CERATOSA LOCALITIES.

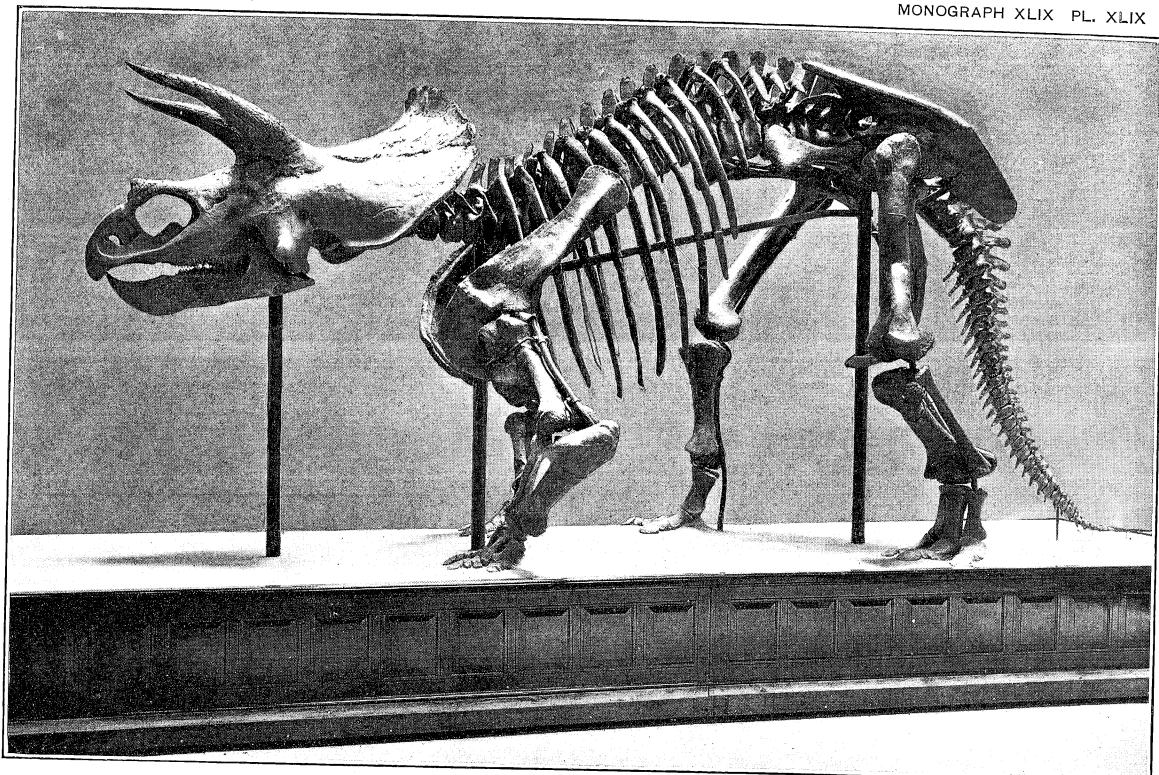
Compiled by R. S. Lull.



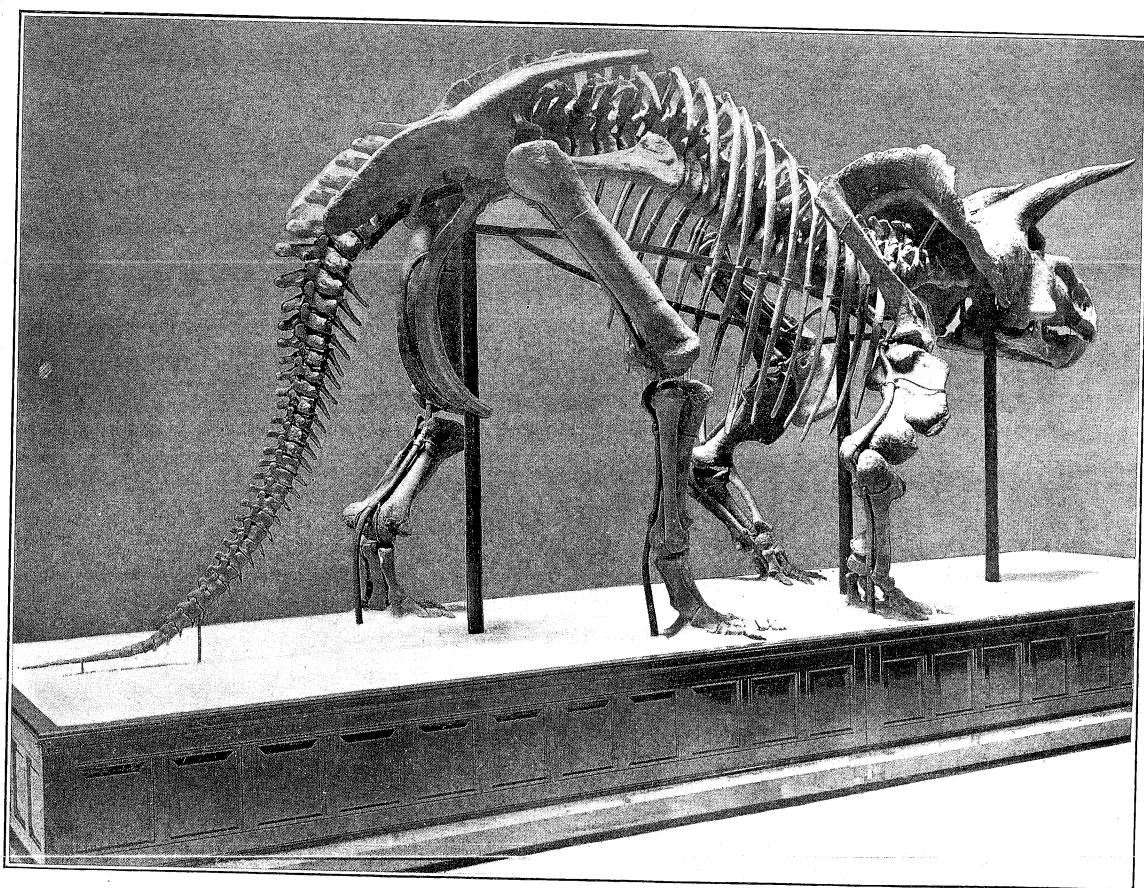
+ Indicates localities where Triceratops skulls have been found  
♦ " mammals have been found  
○ " Hadrosauridae have been found

— Road to fossil beds  
- - - Ceratops border

MAP OF CONVERSE COUNTY, WYO.  
After J. B. Hatcher.



A



B

## RESTORATION OF TRICERATOPS.

Views of mounted skeleton in United States National Museum. A, Side view; B, oblique rear view.